



United States Department of Agriculture

National Aviation Safety and Management Plan 2017-2018

(with Region 1 supplement/update 2018)



Forest Service

January 2017

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2017-2018

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2017-2018

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2017-2018

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Contents

1.0 Aviation Management Plan	1
1.1 Purpose	1
1.2 Mission, Vision, and Core Values	2
1.3 Leader’s Intent	2
1.4 Aviation Doctrine	3
1.5 USDA Forest Service Aviation Strategic Plan	6
1.6 Authority	7
1.7 General Policy	8
2.0 Aviation Management Organization	8
2.1 Organization	8
2.2 Washington Office (WO) Headquarters Staff	9
2.3 Regional Office (RO) Staff	18
2.4 Forest Staff	21
2.5 Additional Aviation Positions	22
2.6 National Groups/Committees	23
2.7 Program Overview	24
3.0 Administration	24
3.1 General	24
3.2 Reporting and Documentation Requirements	25
3.3 Aviation Plans	25
3.4 Aircrew Orientation Briefings	29
3.5 Land Use Policy for Aviation Activities	30
3.6 Budget	31
3.7 Contracting	31
3.8 Aircraft Contract Start/Modification/Extension	32
3.9 Contractor Performance	32
3.10 End Product Contracts	32
3.11 Aircraft Acquisition	33
3.12 Cooperator Aircraft	33
3.13 Aircraft Administrative Use and Reporting	34
3.14 Dispatching	35
3.15 Flight Use Reporting	36
3.16 Coding and Funding of Contract, Fleet, Severity Aircraft Availability	36
3.17 Working Capital Fund (WCF) (Fleet Aircraft)	36
3.18 Federal Excess Personal Property (FEPP)	37
3.19 Program Reviews	38
3.20 New Project/Program/Issue Requests	38
4.0 Aviation Safety Management Systems	42
4.1 General	42

4.2 Safety Management Systems (SMS)	42
4.3 Policy	43
4.4 Risk Management	43
4.5 Assurance	45
4.6 Promotion	49
4.7 National Fire and Aviation Operations Alert System	50
5.0 Aviation Operations	50
5.1 General	50
5.2 Manuals, Handbooks, and Guides	52
5.3 Public/Civil Aircraft Operations	56
5.4 Employees on Unapproved Aircraft	56
5.5 Aviation Emergency Response	57
5.6 Flight Planning	57
5.7 Flight Following	59
5.8 Radio Frequency Management/Communications	59
5.9 Latitude and Longitude Formats	59
5.10 Overdue or Missing Aircraft	60
5.11 Mishap Response	61
5.12 Passengers	63
5.13 Transportation of Hazardous Materials	64
5.14 Invasive Species Control	66
5.15 Fire Chemicals and Aerial Application Policy for Areas Near Waterways	67
5.16 Search and Rescue (SAR)	68
5.17 Large Airtanker Operations	71
5.18 SEAT Operations	73
5.19 Aerial Supervision Operations	73
5.20 Helicopter Operations	75
5.21 Aerial Ignition Operations	79
5.22 Wild Horse & Burro Operations	80
5.23 Aerial Capture, Eradication and Tagging of Animals (ACETA)	80
5.24 Water Scooper Operations	80
5.25 Smokejumper Operations	80
5.26 Light Fixed-Wing Operations	81
5.27 Law Enforcement and Investigations (LEI) Operations	84
5.28 Unmanned Aerial Systems (UAS)	89
5.29 Forest Health Protection (FHP) Operations	90
5.30 Aerial Firefighting Use and Effectiveness (AFUE) Study Aviation Operations	91
6.0 Aviation Training	91
6.1 Aviation Training for All Flight Activities and Positions	91
6.2 Responsibility	92
6.3 Instructor Standards	93
6.4 Records Management	93

6.5 Tuition and Travel	94
6.6 Development	94
6.7 IAT/NWCG Crosswalk	94
6.8 Aviation Contracting Officer Representative (COR) Requirements	95
6.9 Crew Resource Management (CRM) Training	95
7.0 Airspace Coordination	95
7.1 Interagency Airspace Coordination	95
7.2 Fire Traffic Area (FTA)	96
7.3 Temporary Flight Restriction (TFR)	96
7.4 Aircraft Transponder Code (Firefighting)	97
7.5 Airspace Boundary Plan	97
7.6 Airspace De-confliction	98
7.7 Airspace Conflicts	98
7.8 Airspace Agreements – Memorandums of Understanding	98
8.0 Aviation Security	99
8.1 Aviation Security	99
8.2 FS Facilities Security Risk Assessments	99
8.3 FS Security Response Actions	100
8.4 General Aviation Security Awareness Programs	100
8.5 Aircraft Security Information (Cooperators)	100
8.6 TSA Commercial Airport Security	101
9.0 Aviation Facilities	101
9.1 General	101
9.2 Permanent Aviation Facilities	101
9.3 Temporary Aviation Facilities	102
9.4 Safety	102
9.5 Agency Owned/ Operated Facilities	102
9.6 Agency Owned/Operated Airstrips	103
9.7 Leasing	103
9.8 Funding	103
9.9 Land Use Agreements	103
9.10 Facilities Security	104
10.0 Appendix	104
10.1 Sample Letter of Cooperator Approval	104
10.2 Cooperator Approval Guide	104
10.3 Authorization for Law Enforcement and Investigations Employees to Fly on Department of Justice (DOJ) and Department of Homeland Security (DHS) Aircraft	105
10.4 Fixed Wing Aircraft Passenger Manifest Form	106
10.5 Project Proposal Template	106
10.11-10.21 Region 1 appendices	112
10.11 Use of FS owned, contracted, or leased A/C for airshows	113
10.12 Workforce Plan	114

10.13 PASP template.....	115
10.14 RAO delegations to FAO/UAO and RASM to review PASPs.....	116
10.15 FAO meeting/conf call SOPs and call template.....	117
10.16 Helicopter PPE waiver.....	120
10.17 Region 1 Pilot Training and Operations Guide.....	122
10.18 NRCG Aviation Safety and Technical Assistance Team (ASTAT) handbook-draft.....	123
10.19 NRCG 2018 letter on AIS.....	124
10.20: Region 1 Backcountry Airstrip Supplement.....	125
10.21 Unmanned Aircraft Systems Supplement.....	126

Digest

The table below provides a list of changes made to the 2016 National Aviation Safety and Management Plan (NASMP). *Note:* This list is not inclusive of all changes made.

Section	Description of Change
1.1	Updated <i>Purpose</i> and biennial national plan language (WO, RAO, & RASM)
2.6.3	Added Interagency Fire UAS Subcommittee (IFUASS) to list of NIAC subcommittees (WO)
3.3	Updated <i>Aviation Plans</i> language to accurately reflect policy (WO)
3.3.1	Added additional policy reference to NASMP section (WO)
3.3.10	Added Unmanned Aircraft Systems Operations Plan (WO)
3.4	Updated Aircrew Orientation Briefings language (WO)
4.5.1	Updated title to reflect current USFS FAM Safety Management System Guide (WO)
4.5.3	Updated Accident Review Process language (WO)
4.5.5	Updated Project Aviation Safety Plan review language (WO)
5.2.4	Added Unmanned Aircraft Systems Operations Plan (WO)
5.2.6	Added Regional UAS Desk Guides and web link to the list of <i>Other References</i> (WO)
5.6.4	Updated Flight Hazard Maps language (WO)
5.15.1	Updated Retardant Avoidance Areas language in accordance with Nov 2013 <i>Implementation Guide for Aerial Application of Fire Retardant</i> and updated link to retardant avoidance map repository (WO)
5.20.5	Removed 2016 language specific to Region 6 LEI (WO)
5.30	Updated Aerial Firefighting Use and Effectiveness (AFUE) Study Aviation Operations language (WO)
5.30.1	Updated AFUE Study Aircraft Incident Airspace De-confliction language (WO)
10.4	Removed Project Proposal Template from this section, and created place holder for Fixed Wing Aircraft Passenger Manifest Form (WO)
10.5	Placed the Project Proposal Template in this new section (WO)

Region 1 significant additions to the NASMP
(*indicates 2018 update)

Section	Description of Change
1.1	Added process for review and updates for Regional supplements
1.1*	Defined 'best management practices' as they appear in the RASMP
1.4*	Aviation doctrinal process 'best management practices'
2.3.5	Updated GACC Aerial Supervision Representatives (GACC REPS)
2.3*	Added aviation sharing responsibilities to RO personnel
2.3*	Added ASI-avionics
3.15.2	DOI contract reporting systems is called Aviation Information Reporting Support (AIRS)
3.3.9*	Revised minimum standard PASP template. Added delegation of PASP review to specific FAOs. Moved Hazard Maps to chapter 5
3.3.10	The RAO or designee will complete the review in 5 working days.
3.9	Remove
4.1	The Region plans to conduct an SMS Gap Analysis, charter a working group, and a goal of an International Standard for Business Aviation Organization (IS-BAO) Audit.
4.4*	Added use of Flight Risk Assessment Tools (FRATs) as 'best management practice'
4.5.1	Aviation Safety Technical Assistance Teams will be formed as necessary to perform safety assurance and technical assistance on incident operations and follow the regional standard ASTAT Handbook.
5.0*	Added "R1 Pilot Training and Operations Guide as 'best management practice'
5.0*	Added Aviation Sharing 'best management practices'
5.0*	Moved helicopter module marry-up procedures to Helicopter Operations section
5.14	Reference Guide to Preventing Aquatic Invasive Species Transport by Wildland Fire Operations PMS 444 https://www.nwcg.gov/sites/default/files/publications/pms444.pdf
5.15.1	Updated link to Guide for Aerial Application of Fire Retardant and corrected date to June 2016.
5.17*	R1 has no dedicated VLAT bases
5.18	IDL MASTER AGREEMENT
5.20*	Added Helicopter DO/DO w/supplemental restraint language
5.20.1	The region coordinates the location of short-haul assets based on response circles, activity levels, unit response and other factors. Recommend completion of GAR or FRAT prior to Initial Attack.
5.21	Added definition of high performance helicopter for aerial ignition
5.21*	Referenced 5.20 DO/DO information for PSD operations
5.26	For PPE requirements on mission flights refer to the "Red Book".
5.28	Formation of a group.
10.11-10.21*	Added appendices: FS aircraft at airshows, workforce plan, PASP template, FAO delegation for PASP review, FAO meeting/conf call SOPs, Helicopter PPE waiver, Region 1 Pilot Training and Operations Guide, ASTAT handbook, NRCG letter on AIS, R1 Backcountry Airstrip Supplement, UAS supplement

1.0 Aviation Management Plan

1.1 Purpose

The purpose of the Forest Service National Aviation Safety and Management Plan (NASMP) is to describe Washington Office Fire and Aviation Management (FAM) leader's intent, authority, roles and responsibilities, programs, and activities. Additionally, it provides strategic and operational direction as well as operational guidance to each organizational level. While the information contained within this plan references policy, this document neither establishes policy nor does it change existing policy. Although this is a biennial national plan, it may receive annual supplements at the discretion of individual Regions and Units.

The USDA Forest Service must endeavor to place the safety of employees above all else and ensure recognized hazards are mitigated. The Forest Service's goal is to develop a culture that achieves and maintains a zero accident rate. Prior to conducting any work projects, all risks should be mitigated to the lowest acceptable level. Incorporating [FS Aviation Safety Management System \(SMS\) Guide](#) with a strong Quality Assurance (QA) component will improve the operating model for safety, efficiency, and effectiveness.

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OBJECTIVES:

1. To provide an expansion for local guidance, but not a replacement for aviation management directives.
2. To describe regional aviation management programs and activities.
3. To provide strategic direction for unit aviation activities.

Best Management Practices: Certain sections of this supplement are identified as 'best management practices'. These sections are generally designed to "proof" new language or procedures in the plan, with the intent to conduct an After Action Review (AAR) on the practices to determine final procedures and incorporation into policy.

The process for review and updates for Regional Supplements will be requested for input and comments from the Forest Aviation Officers, Regional Aviation staff, FH&P staff, LE&I staff, and other stakeholders. This information will be collated, prioritized if needed, and sent for review, which will include review by Forest Fire Management Officers. The RAO will determine the final version for the Regional Forester's review and approval.

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1.2 Mission, Vision, and Core Values

Forest Service Aviation Mission. To provide safe, efficient, and coordinated aviation support for agency operations; to support partnership agreements; and to meet current and future needs through innovation and technology in order to sustain the health, diversity, and productivity of the Nation's forests and grasslands.

Forest Service Aviation Vision. Lead the world in aviation, supporting natural resources and wildland firefighting.

Fire and Aviation Management Core Values. Safety, integrity, treating people with mutual respect, and land stewardship.

Forest Service Aviation Core Values. To succeed in our mission as a public service organization, we believe that:

- Uncompromising integrity is a nonnegotiable part of our daily work activities.
- Excellence is expected.
- Proactive safety is a condition of employment.
- Disagreement does not equal disrespect.
- Everyone is accountable for his or her actions.
- Honest mistakes are expected.
- We can overcome challenges through innovation, collaboration, and hard work.

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1.3 Leader's Intent

The Forest Service's aviation program goal is to provide aviation tools that safely and efficiently accomplish missions related to the task of managing national forests. Aircraft are dynamic and high impact resources that can be both expensive and unforgiving when used carelessly. These resources require competent operational oversight; and appropriate utilization of aviation resources can drastically improve operational effectiveness and efficiency, while reducing cost and overall risk. Aviation management requires balanced and pragmatic consideration of multiple complex factors, including safety, the environment, costs and mission goals.

Goal 1: Zero Accident Organization. Become a zero-fatality and zero-accident organization by implementing a Safety Management System (SMS) agency-wide approach to management and operations that includes safety management policy, safety risk management, safety assurance and safety promotion.

Goal 2: Take Care of Our People. Recruit and maintain a sufficient number of highly qualified, trained and motivated workforce members.

Goal 3: Organize for Success. Align the Forest Service aviation program and organization to meet the needs of current and future operations.

Goal 4: Take Advantage of Technology. Where feasible, deploy technologically advanced and cost-effective aircraft, equipment and infrastructure to meet the agency's current and future mission.

Refer to the [USDA Forest Service Aviation Strategic Plan](#) for additional information.

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All individuals are expected to closely monitor aviation operations with an eye to managing risk at the lowest level possible. If you are uncomfortable with a mission, voice concerns before the mission to elevate decision making to the appropriate level and ensure risk mitigations are in place. We will continually assess, analyze, communicate, and share risk before, during, and after operations. We do not accept unnecessary risk.

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1.4 Aviation Doctrine

Management has defined policy and doctrine in [FSM 5700](#) that conveys aviation safety expectations and objectives to employees. Aviation safety policy in [FSM 5700](#) addresses roles, responsibilities, and authorities regarding aviation safety at each organizational level.

This process starts with a clear value-based philosophy of what the organization and its business model should be and what it is about. The relevance of safety principles to Forest Service doctrine for aviation management cannot be overstated. These principles permeate the aviation management business model and drive SMS program design.

“As an organization our commitment is to manage risk to the lowest practical level.” This effort is an iterative process that requires diligence in the following principle areas:

- Develop and maintain a safety culture that recognizes the value of safety management systems;
- Clearly define the duties, responsibilities, and accountabilities for all employees;
- Provide all employees with adequate training and information to enhance performance;
- Comply with or exceed all regulatory and agency specific requirements;
- Proactively manage the risks associated with our operation;

- Standardize risk management as a part of the aviation operations planning process such that all deliberate/strategic risk assessments follow the general format found in section 3.5 of the [FS Aviation Safety Management System \(SMS\) Guide](#).
- Ensure externally supplied services and materials meet or exceed all regulatory and agency specific requirements;
- Determine specific performance goals and consistently measure performance against those goals;
- Conduct internal management and safety reviews to improve performance;
- Encourage all employees to report errors and safety issues in the spirit of a just culture.
- To formalize risk management as a part of the planning process, risk assessments should follow the format found in section 3.5 of the [FS Aviation Safety Management System \(SMS\) Guide](#).

1.4.1 Quality Principles

Top management shall ensure that quality policies and procedures are consistent with [Aviation Safety Management System](#) requirements defined in this manual. [Aviation Safety Management System](#) quality management (assurance and control) processes shall be consistent with agency to improve the efficiency of the entire organization.

1. “Create a constancy of purpose.” Replace short-term reaction with long-term planning. This applies to action plans that make adjustments for weaknesses and deficiencies.

- Avoid reactive fixes to organizational problems.
- Define the problems of today and the future.
- Allocate resources for long-term planning and plan for high quality services.
- Constantly improve product and service.

2. “Adopt a new philosophy.” Meaningful change can only take place from within the organization. Change focus from operations output to quality service.

- Quality costs less not more.
- The call for major change comes from the top.
- Stop waiting for direction from upper management and instead seek direction by evaluating field customer needs.

3. “Cease dependence on inspection to achieve quality.” Quality does not come from inspection alone. If quality is designed into the process, and standards are fully implemented, then variation is reduced, and there is less need to inspect operations for defects.

- Inspections should be used to collect data for process control and to provide input to guide management decisions resulting in a reduction in potential errors.

- Quality cannot be achieved through reactive identification and elimination of errors because it perpetuates the fly/crash/fix/fly cycle.

4. "Do not award business based on price tag alone." Our actions should be focused on the detection of variations between vendors' performances to identify the best service providers. Contract language should be consistent and clear so vendors understand our requirements.

- Price alone has no meaning: change focus from lowest cost to best value/cost.
- Develop a longer term relationship (contract) between the operation and vendors.

5. "Improve constantly the system of production and service." Each new action must constantly strive to reduce variation and introduce mitigations that reduce mishaps and improve effectiveness.

- Quality starts with the intent of management, which is found in directives.
- Design Quality into the system with a fundamental focus on team work in design.
- Constantly maintain awareness and continue to reduce waste.
- Constant improvement of the system requires greater efforts than reactively responding to errors and issues.

1.4.2 Aviation Promotion Principles

Management must be committed to the implementation of SMS as their highest priority: to provide safety resources, to continuously improve safety practices, and to provide a framework for responsibility and accountability.

1. "Institute a program of education and self-improvement." Personnel need a thorough grounding in the principles, tools, and techniques of SMS. People must learn new ways of working together as teams and adopt new behaviors that support the new management philosophy.

- Educate for higher awareness in management and in customers.
- Develop team-building skills in employees.

2. "Break barriers among staff areas." Another idea central to QA is the concept of the 'internal customer,' which in our case may mean that management processes, antiquated policies, budget allocations, and hiring restrictions are the barriers to our success. We need to act to correct such inefficiencies.

- Promote team work to identify internal barriers and satisfy the internal customer.
- Know your inefficiencies as well as those of your suppliers and customers.

3. "Adopt and institute leadership." Leadership means designing the system around high standards, building a quality culture, and modeling behavior that exemplifies the values to support such a culture.

- Remove barriers to foster pride of workmanship and recognize positive outcomes.
- Leaders must know the work they manage and supervise.

4. "Take action to accomplish the transformation." Everyone in the organization must work together to facilitate change management. Forest Service Aviation Managers at all levels in the program should:

- Be proactive within the implementation of the change management process.
- Take pride in the new doctrine and the Quality Assurance Program Plan (QAPP).
- Include a cross section of people to implement the change from the top to the bottom.

1.5 USDA Forest Service Aviation Strategic Plan

The [USDA Forest Service Aviation Strategic Plan](#) provides an outline of how the agency will use aviation assets to accomplish the Forest Service mission: "To sustain the health, diversity, and productivity of the Nation's forests and grasslands for the benefit of present and future generations."

The Aviation Strategic Plan defines Aviation Management's vision, mission, values and goals. To accomplish the Forest Service Aviation mission, "To provide safe, efficient, and coordinated aviation support for agency operations; to support partnership agreements, and to meet current and future needs through innovation and technology in order to sustain the health, diversity, and productivity of the Nation's forests and grasslands," Aviation goals are focused on safety, people, organization, and technologically advanced assets. These goals are characterized by specific objectives. Performance measures are used to define how well the agency has advanced toward accomplishing each objective. Strategies define the method or approach taken to accomplish the objectives and are reflective of opportunities and threats. Action plans will move the strategies forward and will be specific, measurable, and attainable. Progress will be reported in our annual aviation program report to assist the Forest Service with monitoring performance.

The Aviation Strategic Plan is the umbrella document that provides strategic context for all aviation activities. The plan is not a stand-alone document, but rather it complements, enhances, and guides other plans and strategies. The plan is tiered to higher level documents such as the Forest Service Strategic Plan. It is the long-term framework for guiding future Forest Service Aviation activities.

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AVIATION DOCTRINE

[The Region 1 Foundational Doctrine and Guiding Principles for the Northern Region Fire, Aviation and Air \(FAA\) Program \(March 2007\)](#) provides the guiding principles outlined in the Doctrine and establishes clear direction, a vision of where we are headed, our core values, and the way we will implement the FAA program. Aviation practitioners will embrace this doctrine and turn words into action with all the vigor and passion they possess. These principles set the direction for the program, how we will implement the program, and will be our anchor point for changes in process and policy that inhibit us from reaching excellence in the Northern Region's Fire, Aviation and Air program.

Procedures in policy and plans are designed to apply to most situations encountered. In the event a situation indicates that an **outstanding reason** exists to deviate from policy or instruction, the following guidance is provided:

- For life safety emergencies, deviate only to the extent necessary to assure to the protection of life. Communicate one's intent as practical. Document any deviations with a SAFECOM.
- For non- life safety situations a written risk assessment with mitigations clearly indicating the requested deviation to policy is the recommended tool to:
 - Seek concurrence from the next higher level in aviation management
 - Include the Regional Aviation Officer for review
 - Obtain authorization from the appropriate line officer
 - Document the deviation with a SAFECOM
- For non- life safety, time critical situations:
 - Utilize the doctrinal principles to make the best decision possible regarding any policy/instruction deviation, following the stated leader's safety intent for the mission
 - Follow up any deviation immediately with notifications/involvement of the next higher level of aviation management
 - Document any deviation with a SAFECOM

AVIATION STRATEGIC PLAN--Workforce

To maintain a viable aviation workforce the aviation community will use the most current version of the *Region 1 Workforce Plan* (see appendix 10.12) to provide direction for continuous improvement in our workforce during times of constrained operating budgets.

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1.6 Authority

This plan fulfills the requirements outlined in [FSM 5700](#). This plan sets the standard that will be aviation policy and has been developed to provide standardization and policy for aviation programs. While this document is Forest Service specific, it does incorporate interagency standards.

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1.7 General Policy

The policy of the Forest Service requires employees to follow the direction in aviation manuals, handbooks, and the aviation guides as listed in this chapter, under [FSM 5706](#).

Aviation operations require regulations, manuals, guides, and checklists to execute and coordinate operations in a safe and effective manner. Where the terms “shall” and “must” are used in manuals, handbooks, or guides, compliance with those items is mandatory and not discretionary ([FSM 1110.8 – Exhibit 01 Degree of Compliance or Restriction in Directives](#)). These principles should guide employees; they are authoritative, but require employees to apply their judgment in order to solve problems.

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2.0 Aviation Management Organization

2.1 Organization

The Washington Office (WO) Fire and Aviation Management (FAM) is located at the USDA Forest Service National Headquarters in Washington D.C. and at a Washington Office detached unit in Boise, ID.

The Forest Service has nine Regional Offices and the North East Area located throughout the United States.

Region 1: Missoula, MT

Region 2: Golden, CO

Region 3: Albuquerque, NM

Region 4: Ogden, UT

Region 5: Vallejo, CA

Region 6: Portland, OR

Region 8: Atlanta, GA

Region 9: Milwaukee, WI

Region 10: Juneau, AK (Fire and Aviation are combined with Region 6, Portland, OR)

Northeast Area: Newtown Square, PA

There are five (5) Research Stations, one (1) Institute, and one (1) Laboratory.

Pacific Northwest Research Station: Portland, OR

Pacific Southwest Research Station: Berkeley, CA

Rock Mountain Research Station: Ft. Collins, CO

Northern Research Station: Newtown Square, PA

Southern Research Station: Ashville, NC

International Institute of Tropical Forestry: San Juan, PR

Forest Products Laboratory: Madison, WI

Each Region has several Forests/Units or Stations located within their geographical location or area of responsibility.

2.2 Washington Office (WO) Headquarters Staff

2.2.1 Director, Fire and Aviation (FAM)

The Director, FAM, is responsible to the Deputy Chief for State and Private Forestry. The Director, FAM's responsibilities are located in the [FSM 5704.2](#), [FSM 5720.43](#), and Chapter 10 of [FSH 5709.16](#).

2.2.2 Deputy Director, Aviation, Operations and Risk Management

The Deputy Director, Aviation, Operations and Risk Management responsibilities are located in the [FSM 5704.2](#).

2.2.3 Assistant Director, Aviation

The Assistant Director, Aviation responsibilities are located in the [FSM 5704.21](#). The Assistant Director, Aviation provides national program direction, leadership, and management of the Forest Service aviation program, including coordination of aviation activities with other staffs, agencies, and groups, with an emphasis on aviation planning, budget, policy, operations, aircraft airworthiness, pilot standardization, aviation training and quality assurance. The Assistant Director, Aviation supervises:

- Branch Chief, Aviation Business Operations – Washington D.C.
- Branch Chief, Aviation Operations – Boise, ID
- Branch Chief, Airworthiness – Boise, ID
- Branch Chief, Pilot Standardization – Boise, ID
- Branch Chief, Aircraft Program Management – Washington D.C.
- Branch Chief, Aviation Strategic Plans – Boise, ID

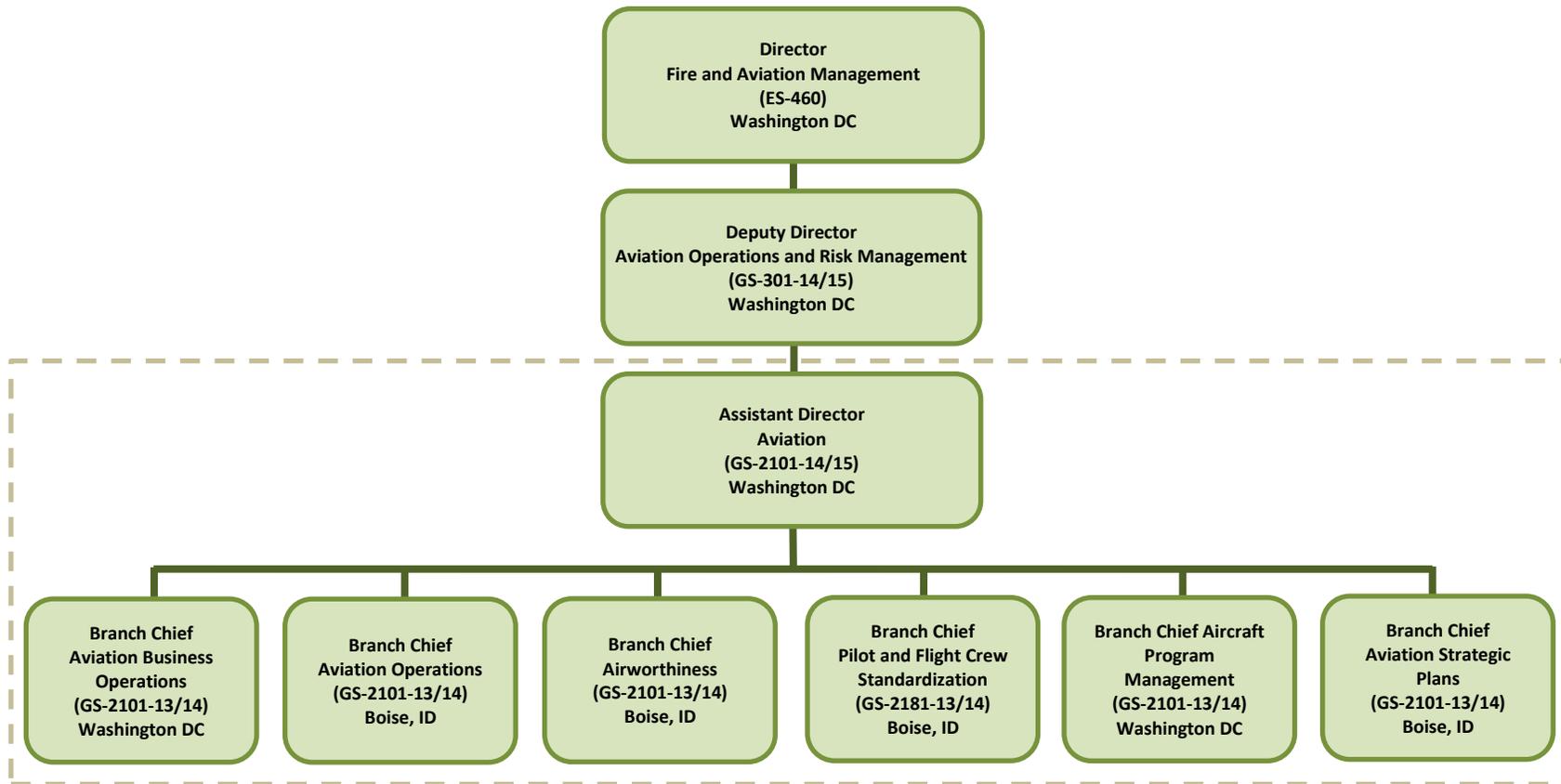
2.2.4 Branch Chief, Aviation Business Operations (ABO)

The Branch Chief, Aviation Business Operations provides oversight, planning, coordination, and direction for aviation policy, budget, reporting, and analysis. The Branch Chief ABO supervises three Aviation Management Specialists.

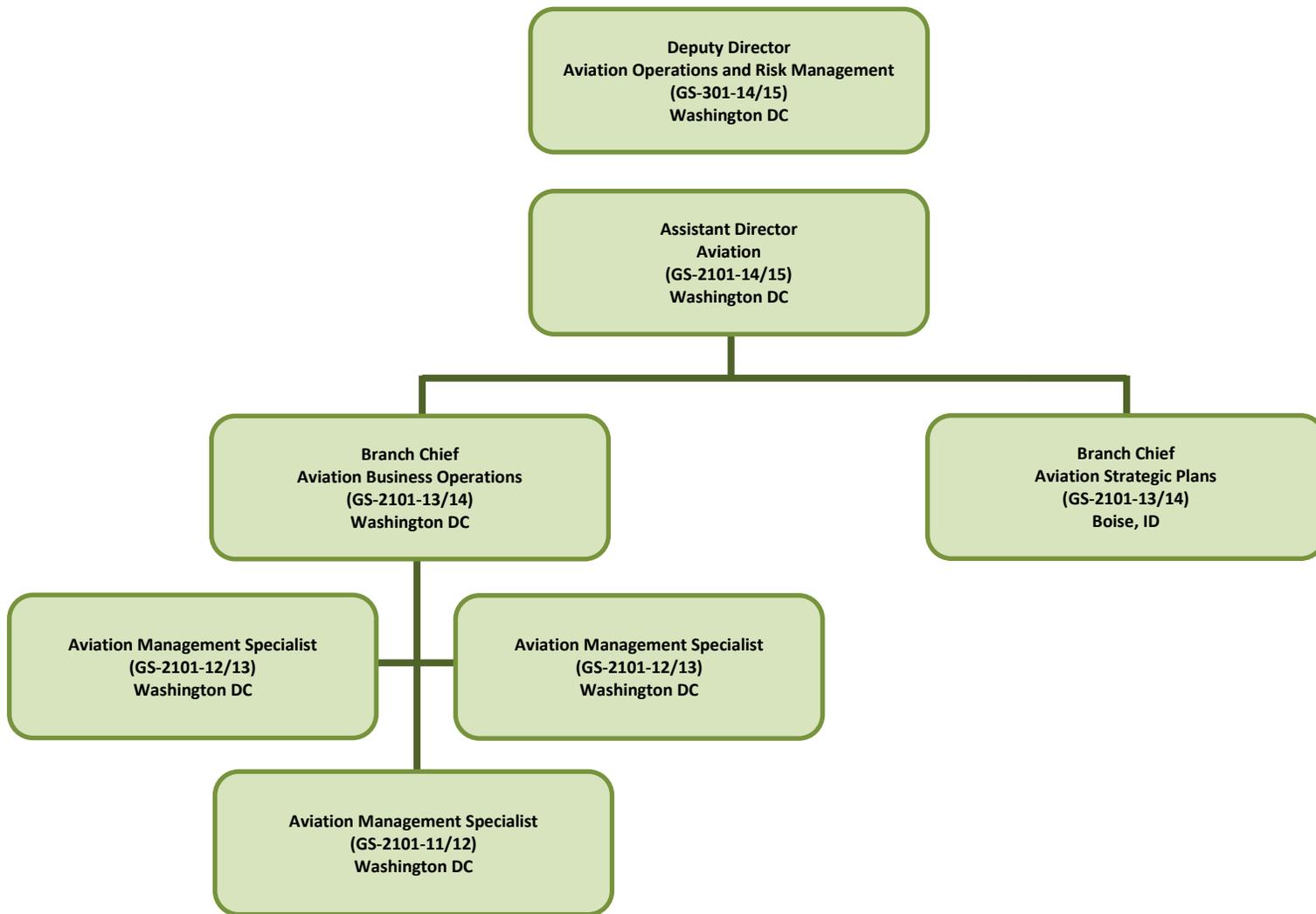
2.2.5 Branch Chief, Aviation Strategic Plans

The Branch Chief, Aviation Strategic Plans develops aviation strategy for the Forest Service.

Washington Office Fire and Aviation Management Aviation Division



Washington Office Fire and Aviation Management Aviation Business Operations and Aviation Strategic Plans



2.2.6 Branch Chief, Aircraft Program Management

The Branch Chief, Aviation Program Management manages aircraft fleet programs.

2.2.7 Branch Chief, Aviation Operations

The Branch Chief, Aviation Operations provides oversight, coordination, and direction of aviation operations conducted by the National Office and Regions. The Branch Chief supervises the National Helicopter Program Manager, National Airtanker Program Manager, National Aircraft Coordinator, National Aerial Supervision Program Manager, National Helicopter Operations Specialist, National Smokejumper Program Manager, and National Rappel Specialist. The Branch Chief's responsibilities are located in the [FSM 5704.22](#) and [FSH 5709.16, Chapter 10, 10.41c](#).

National Helicopter Program Manager

The National Helicopter Program Manager:

- Provides oversight for the helicopter program.
- Serves as principal helicopter program advisor to National Contracting, Fire and Aviation HQ staff and the Regions in the development and implementation of policies, programs, and standard practices for helicopter programs and specialized projects.
- Responsible for performing contract helicopter inspections and pilot approvals.
- Serves as the contact and coordination point for industry groups and cooperating agencies regarding contract helicopter approvals and operations.

National Airtanker Program Manager

The National Airtanker Program Manager provides national airtanker program leadership, coordination, oversight, and interagency cooperation.

National Aircraft Coordinator

The National Aircraft Coordinator is responsible for coordinating the efficient use of airtankers, helicopters, lead planes and ASMs, and other aircraft as assigned. Movement of aircraft is coordinated with the National Interagency Coordination Center.

- Manages the Defense Logistics Administration fuel program
- May provide technical oversight, reporting and Contracting Officer Technical Representation (COTR) support for nationally contracted aircraft

National Aerial Supervision Program Manager

The National Aerial Supervision/Light Fixed Wing Program Manager provides national program leadership, coordination, and interagency cooperation for the aerial supervision program and advisor to Contracting, Fire and Aviation HQ staff and Regions in the development and implementation of policies, programs, and standard practices

for the light fixed wing aircraft and programs. The aerial supervision program consists of air tactical, lead plane, aerial supervision module and helicopter coordinator operations.

National Helicopter Operations Specialist (NHOS)

The National Helicopter Operations Specialist is responsible for the oversight, coordination, and direction of helicopter operations activities conducted by the National Office. The NHOS:

- Provides primary technical oversight and support for WO contracted helicopters.
- Provides oversight and assistance to regional helicopter program managers.

National Smokejumper Program Manager

The National Smokejumper and Large Fixed Wing Program Manager provides national program leadership, coordination, and interagency cooperation in the smokejumper program and is program advisor to Contracting, Fire and Aviation HQ staff, and Regions in the development and implementation of policies, programs, and standard practices for large fixed wing aircraft and programs.

National Rappel Specialist (NRS)

The NRS is responsible for the oversight in developing, recommending and implementing rappel standards, objectives, plans, and policies for the national rappel program.

The NRS:

- Provides oversight and continuous coordination of the national rappel program
- Assures standardization, quality assurance, integration and coordination among the rappel program to ensure that the program and equipment reflect aviation management policy direction, objectives, and regulations.

2.2.8 Branch Chief, Airworthiness

The Branch Chief, Airworthiness supervises Aviation Maintenance Inspectors (Airworthiness), Aviation Safety Inspectors (Avionics), Aeronautical/Aerospace Engineer, and an Aviation Budget Analyst. The responsibilities of the Branch Chief are in the [FSM 5704.23](#).

Aviation Safety Inspectors–Airworthiness (5)

The Aviation Safety Inspectors – Airworthiness:

- Provide oversight for delegated National/Regional program areas.
- Perform National and Regional Aviation program quality assurance, inspections and evaluations to support Forest Service.
- Establish work programs for inspection, monitoring, audits and surveillance.

- Evaluates compliance with Forest Service policy and [Federal Aviation Regulations \(14 CFR\)](#) with respect to airworthiness, maintenance, preventive maintenance, and alteration programs.
- Provides expert technical representation on agency and interagency working groups.
- Prepares and reviews technical specifications for aircraft, aircraft equipment/modifications, maintenance, and inspection requirements

Aviation Safety Inspectors–Avionics (2)

The Aviation Safety Inspectors – Avionics:

- Performs National and Regional aviation avionics program management, including planning, organizing, implementing, and controlling the aviation avionics program.
- Accomplishes equipment, aircraft, and operator inspections and evaluation to support the Forest Service.
- Evaluates compliance with Forest Service policy and [Federal Aviation Regulations \(14 CFR\)](#) with respect to avionics, avionics maintenance, avionics installations, and alteration programs.
- Inspects the avionics of multi-engine piston, or twin-engine turboprop aircraft as well as various fixed and rotor wing aircraft owned, contracted by or cooperated with by the Forest Service.
- Prepares and reviews technical specifications for avionics and inspection requirements, contract rewrite evaluations (e.g., Subject Matter Expert) and contract pre-award evaluation.
- Submits findings and recommendations to the National and/or Regional office which result from surveillance and inspections of aircraft.

Aeronautical/Aerospace Engineer (1)

The Aeronautical/ Aerospace Engineer:

- Provides oversight of Forest Service owned Type Certified Data Sheets (TCDS) and Supplemental Type Certificates (STC), and the Forest Service Operational Loads Monitoring (OLM) Program.
- Assists in the evaluation of proposed new equipment and aircraft modifications.
- Member of the Forest Service Airworthiness Working Group and/or the Interagency Airworthiness Practices Board.
- Interfaces with engineering representatives from aircraft and equipment manufacturers.
- Makes up a part of the airworthiness approval process for UAS utilized by the Forest Service.

Aviation Budget Analyst (1)

The Aviation Budget Analyst is responsible for analyzing and evaluating aviation cost and use data for aviation plans and reports; aviation business cases; managing projects; financial analysis and assessment of compliance with laws and regulations. The Aviation Budget Analyst also completes the Federal Aviation Information Reporting Systems reporting and working capital fund analysis and reports.

2.2.9 Branch Chief, Pilot and Flight Crew Standardization

The Branch Chief, Pilot and Flight Crew Standardization supervises a National Fixed Wing Standardization Pilot, a National Helicopter Standardization Pilot, and National Helicopter Inspector Pilots. The Branch Chief, Pilot Standardization:

- Identifies and approves qualified pilot instructor, check, and inspector pilots.
- Maintains current listings, including all mission and aircraft authorizations, of all qualified instructor, check, and inspector pilots.

National Fixed-Wing Standardization Pilot (1)

The National Fixed-Wing Standardization responsibilities are in the [FSH 5709.16, Chapter 20, 20.42](#).

National Helicopter Standardization Pilot (1)

The National Helicopter Standardization responsibilities are in the [FSH 5709.16, Chapter 20, 20.44](#).

National Helicopter Inspector Pilots (4)

The National Helicopter Inspector Pilots:

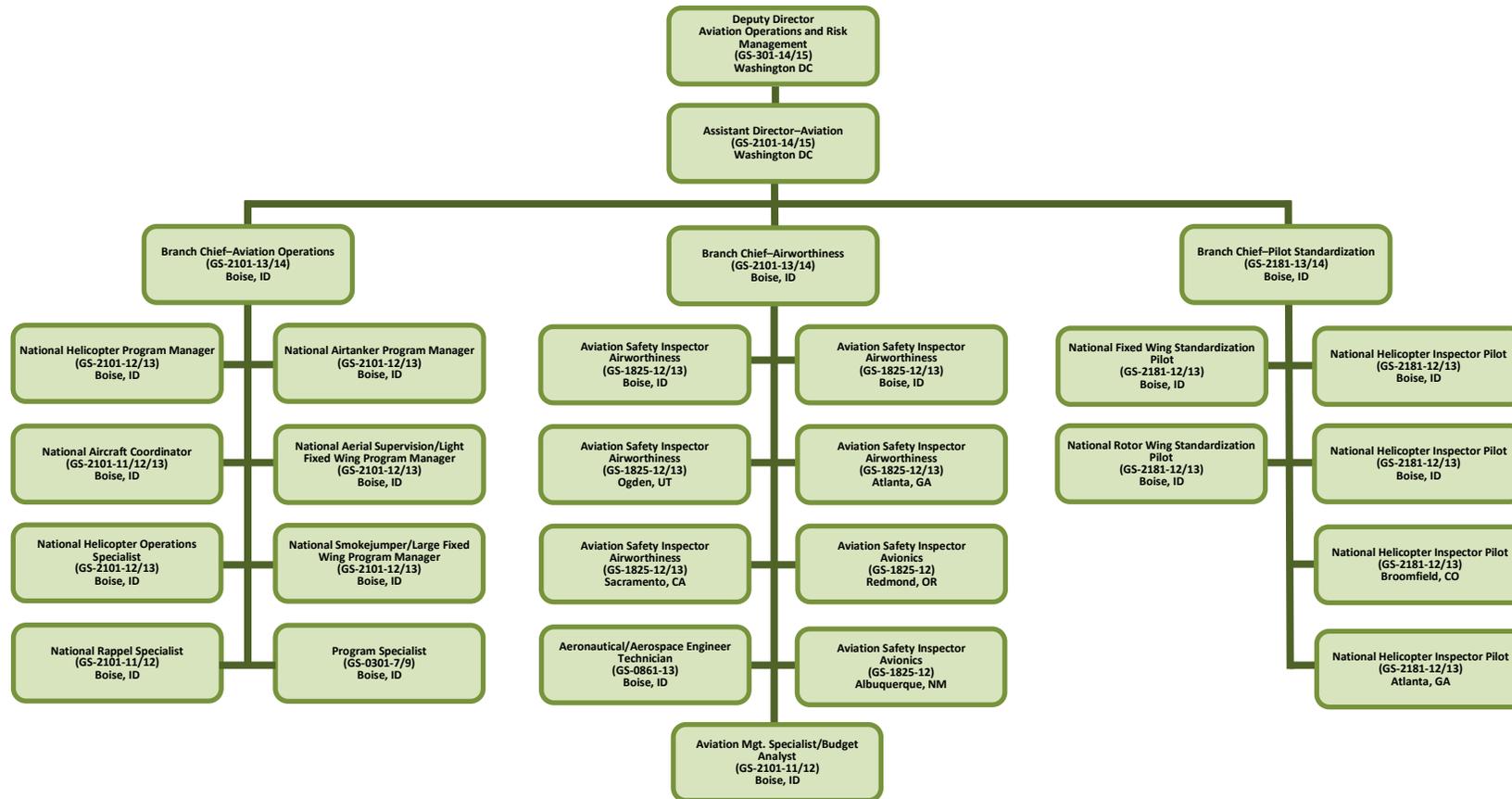
- Provides leadership and oversight for the development and implementation of a national helicopter pilot and training program.
- Provides expertise necessary to support the USFS National Standardization and Quality Assurance initiative for oversight of national contract operations.
- Administers pilot evaluations for the purpose of determining an individual's suitability to perform special use missions typical of natural resource operations.
- Provides technical oversight of pilots, aircraft, and equipment used in support of agency missions.

Two NHIPs are stationed in Boise, 2 virtual (Colorado and Georgia).

2.2.10 Assistant Director, Risk Management

The Assistant Director, Risk Management supervises one Branch Chief, Aviation Safety Management Systems

Washington Office Fire and Aviation Management Operations, Airworthiness, and Pilot Standardization



2.2.11 Branch Chief, Aviation Safety Management Systems

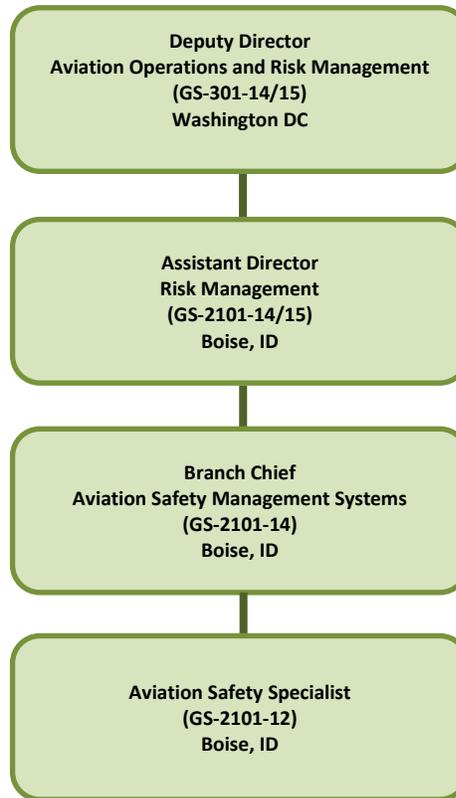
This position has the operational responsibility for development, implementation, and monitoring of the Aviation [Safety Management Systems](#), including oversight of the following key SMS components:

- Policy, including managing and coordinating implementation of the National Aviation Safety Management Plan.
- Risk management.
- Safety Assurance.
- Safety Promotion, including training programs.
- Reporting accidents and incidents to the Director, Fire and Aviation Management Staff, Washington Office and to Forest Service and Department Safety and Health officials.
- Determining the classification of mishaps as accidents, incidents with potential or incidents.
- Management and oversight of Aviation Safety Systems including; National Aviation Safety Center, System Safety Enterprise Team, National Aviation Safety Council, [SAFECOM](#) reporting system, aviation safety training and education.
- Maintains a process for data collection and analysis as well as evaluation of aviation risk management and operational safety.
- Establishes safety criteria and standards for National aviation contracts.
- Coordinates with the National Aviation Officer, Logistics, to assure aircraft airworthiness standards and aircraft selection in Agency and service provider aircraft types and provides guidance for final fleet composition.
- Provides program oversight and direction for aviation education and training, including interagency aviation training (IAT), Advanced Aviation Management Training (AAMT) and Lessons Learned.

National Aviation Safety Specialist

The National Aviation Safety Specialist is responsible for service-wide programs involving the development and implementation of plans and programs in aviation safety and standardization for aviation safety programs.

Washington Office Fire and Aviation Management Aviation Safety and Risk Management



2.2.12 National Forest Health Protection Aviation Manager

The National Forest Health Protection Aviation Manager (NFHPAM) is responsible for coordinating forest health aviation safety and operations with the appropriate Regional Aviation Safety Manager, Regional Aviation Officer or Unit Aviation Officer.

2.3 Regional Office (RO) Staff

Regional level aviation organizations vary based on workload and overall organization. The Regional Aviation Officer and Regional Aviation Safety Manager are the two consistent positions.

2.3.1 Regional Forester

Regional Forester responsibilities are located in [FSM 5704.3](#).

2.3.2 Regional Aviation Officer (RAO)

The RAO is responsible for the oversight, coordination, and direction of aviation operations activities conducted by the Regional Office. The RAO responsibilities are located in the [FSM 5704.3](#), [FSH 5709.16, Chapter 10, 10.42b](#) and [FSM 5720.48b](#).

2.3.3 Regional Aviation Safety Managers (RASM)

The RASM reports to the Director or the Deputy Director and is responsible for implementation, fostering and promoting SMS, including Policy, Risk Management, Assurance and Promotion. Their responsibilities are located in the [FSM 5720.48d](#).

2.3.4 Regional Aviation Safety Inspector (ASI), Airworthiness / Regional Aviation Maintenance Program Manager

The ASI, Airworthiness is responsible for the maintenance and airworthiness program conducted by the Regional Office. The ASI responsibilities are located in the [FSH 5709.16, Chapter 40, 40.44, 40.45](#) and in the [FS Aircraft Inspection Guide \(AIG\)](#).

2.3.5 Regional Aviation Safety Inspectors – Avionics

The ASI, Avionics, performs Regional aviation avionics program management, including planning, organizing, implementing and controlling the aviation avionics program. The ASI accomplishes equipment, aircraft, and operator inspections and evaluation to support the National and Regional Forest Service.

Regional Supplement

Aviation Safety Inspector-airworthiness (ASI)

Conducts inspections for FS, partners, and cooperator owned/contracted aircraft.

Aviation Safety Inspector-avionics

Assists ASI-airworthiness with aircraft maintenance and support of WCF aircraft. Conducts avionics inspections for FS, partners, and cooperator aircraft.

Supervisory Pilots

Responsible for the supervision of regional agency pilots by mission specialty, i.e. smokejumper, ASM/Leadplane, helicopter, infrared, resource reconnaissance, and photography.

Fixed Wing Operations Specialist

Responsible for leadership, coordination and direction of the regional fixed-wing program. Leads and coordinates development of recommended policies, standards and operational procedures. Organizes the regional fixed wing contract light aircraft inspection and pilot approval program. Provides technical support for the Aviation Contracting Officer, Regional Aviation Safety Manager, the Regional Aviation Officer, and Forest Aviation Officers. Responsible for overseeing R-1 tanker bases and SEAT operations. The position assists with and facilitates the sharing of aviation resources as needed (see chapter 5.0—Regional

supplement: Aviation Resource Sharing). This may include: assisting NRCC or dispatch centers with tracking/locating resources, coordinating coverage areas to address resource shortages, being a 'point of contact' for units/IMTs to address current or future resource needs, and facilitating the dialogue needed for resource sharing between units/IMTs.

Helicopter Operations Specialist (HOS)

Responsible for leadership, coordination, and direction of the helicopter program. Provides technical assistance to National Aviation Contracting Officer, Regional Aviation Safety Manager, Regional Aviation Officer and Forest Aviation Officers. Leads and coordinates development of recommended policies, standards and operational procedures.

Coordinates training in helicopter management. Provides technical support for specialized programs such as rappel, short haul, aerial ignition, helitack, and aerial delivery systems. The position assists with and facilitates the sharing of aviation resources as needed (see chapter 5.0—Regional supplement: Aviation Resource Sharing). This may include: assisting NRCC or dispatch centers with tracking/locating resources, coordinating coverage areas to address resource shortages, being a 'point of contact' for units/IMTs to address current or future resource needs, and facilitating the dialogue needed for resource sharing between units/IMTs.

Helicopter Inspector Pilot (HIP)

Performs contract helicopter inspections and pilot approvals. Assist the Helicopter Operations Specialist in the helicopter program management and oversight.

Pilots

Responsible for safe, efficient, and cost effective use of FS owned or leased aircraft (FSM 5704.7 and 5712.31). Pilots assist in performing contract inspections and pilot approvals. Only properly certified and qualified pilots, as designated by the Regional Aviation Officer and/or National Fixed Wing or Helicopter Standardization pilots will be responsible for flight training and management of the Regional standardization and evaluation programs.

Air Tactical Group Supervisor (ATGS) Coordinator

Responsible for coordinating training and disseminating information in support of the ATGS program. The position assists with and facilitates the sharing of aviation resources as needed (see chapter 5.0—Regional supplement: Aviation Resource Sharing). This may include: assisting NRCC or dispatch centers with tracking/locating resources, coordinating coverage areas to address resource shortages, being a 'point of contact' for units/IMTs to address current or future resource needs, and facilitating the dialogue needed for resource sharing between units/IMTs.

GACC Aerial Supervision Representatives (GACC REPS)

Aerial Supervision Specialists, assigned by the Geographic Area Coordination Group, coordinate geographic aerial supervision needs and provide quality assurance oversight of interagency operational and training performance standards. IASG 2017 Chapter 1 Page 10
GACC REPS

- Should be recommended on a rotational basis and delegated in writing.

Scope of Duties

- Serve as a Geographic Area interagency aerial supervision point of contact.
- Coordinate with agency program managers and Geographic Area Training Reps (GATR) to coordinate suitability flights, quality assurance observation flights, final evaluation flights, and training of federal, state, and local agencies.
- Make recommendations concerning training priorities to agency program managers and GATR's.
- May assist the GACC aircraft coordinators with tactical aerial supervision information and recommendations.
- Coordinate with agency program managers to ensure concurrent and cohesive training, training curriculum, and operations standards are met, nationally.
- Provide input to the revision of the Interagency Aerial Supervision Guide and interagency training management system.
- Participate at the National Aerial Supervision meeting (held annually)

GACC Logistics/Aircraft Coordinator

Responsible for regional aircraft coordination, primarily the scheduling and tracking of regional aviation assets while striving for a safe and cost effective utilization of those aviation resources.

Responsible for the area coordination of smokejumper aircraft, lead planes, airplanes, helicopters, and airtankers. Processes resource orders for aircraft received from within the geographic area and from NICC. Serves as the primary contact for aviation dispatch related questions. Coordinates Temporary Flight Restrictions (TFR) and Notices to Airmen (NOTAM) with the Federal Aviation Administration (FAA).

National Aviation Contracting Officer

Coordinates development, issuance, and administration of aviation contracts. Functions as the Administrative Contracting Officer (ACO) for national aviation contract resources within the region. Develop, issue, and administer aviation contracts and rental agreements, with Regional/Forest aviation personnel serving as technical experts, contracting officer's representatives and inspectors.

Forest Supplement

Placeholder.

2.4 Forest Staff

2.4.1 Line Officer

Line Officer responsibilities are located in [FSM 5704.6](#), [FSM 5711.04](#), and [FSM 5720.48a](#).

2.4.2 Forest Aviation Officer/Unit Aviation Officer (FAO/UAO)

The FAO/UAO manages the forest aviation program by providing technical and management direction of aviation resources to support Forest programs. The FAO/UAO should meet the Aviation Manager qualifications in [Interagency Aviation Training Guide](#). The FAO/UAO responsibilities are located in the ([FSM 5704.61](#)). Some forests employ “service-first” positions to fulfill the FAO/UAO responsibilities. On those units, the position is referred to as a UAO.

2.4.3 All Employees

All employees involved in aviation activities are responsible for acquiring, knowing, and following aviation policy and regulations ([FSM 5704.9](#), [FSM 5720.46](#)). Forest Service employees shall fly only in approved government (refer to Government Aircraft definition in [FSM 5705](#)) aircraft flown by an approved pilot(s). Approvals are specified in [FSM 5703.1](#), [5712.3](#), [5712.4](#) and [5713.4](#). Employees are empowered and expected to manage the risks of aviation operations, and make reasonable and prudent decisions to accomplish the mission. Employees shall use an operational risk management process to evaluate the risk and hazards prior to every flight. Individuals will be held accountable for their decisions, which should be based on policy, principles, training, experience, and the given situation.

Forest Service employees have the responsibility to immediately report to the appropriate official any instances of unsafe equipment or aviation operations ([5720.46](#)).

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

2.5 Additional Aviation Positions

2.5.1 Station Aviation Officer (SAO)

The SAO coordinates the station aviation activities with the appropriate FAO/UAO and/or the RAO. The SAO may provide general aviation oversight and technical advice under the guidance of the FAO/UAO or RAO. The SAO will meet the Aviation Manager qualifications in [Interagency Aviation Training Guide](#).

Regional Supplement

Placeholder.

Forest/Station Supplement

Placeholder.

2.6 National Groups/Committees

2.6.1 National Aviation Team (NAT)

The National Aviation Team consists of all members of the Aviation Division, including the Assistant Director, Aviation; six Branch Chiefs; Program Managers and supporting staff.

2.6.2 Interagency Committee on Aviation Policy (ICAP)

This committee is chaired by the General Services Administration (GSA) and includes all federal agencies that own or hire aircraft. GSA established the committee at the direction of the President's Office of Management and Budget (OMB). GSA publishes regulatory policy for aircraft management in [41 Code of Federal Regulations \(CFR\) 102-33](#), "Management of Government Aircraft," and [41 CFR 300-3; 301-10; and 301-70](#), "Travel on Government Aircraft."

[OMB Circular A-126](#), "Improving the Management and Use of Government Aircraft, provides the basic guidance for management of federal aviation programs and for travel on government aircraft."

2.6.3 National Interagency Aviation Committee (NIAC)

The National Interagency Aviation Committee ([NIAC](#)) is established to serve as a body of resident aviation experts, assisting NWCG with realizing opportunities for enhanced safety, effectiveness, and efficiency in aviation related operations, procedures, programs and coordination. NIAC is chartered under the Equipment and Technology Branch of NWCG.

Committee membership will reflect a mix of people who are knowledgeable in the subject area and who represent NWCG member agencies and organizations, including representation from Department of Interior (DOI) Office of Aviation Services (OAS).

The WO Branch Chiefs, Aviation Operations and Pilot Standardization are designated by the WO Assistant Director, Aviation as Forest Service representatives to NIAC.

NIAC Sub Committees include:

- Interagency Aerial Supervision Subcommittee
- Interagency Airspace Subcommittee
- Interagency Airtanker Base Operations Subcommittee
- Interagency Airtanker Board (IAB)
- Interagency Aviation Training Subcommittee (IAT)
- Interagency Fire UAS Subcommittee (IFUASS)
- Interagency SEAT Board
- Smokejumper Aircraft Screening and Evaluation Board (SASEB)
- Interagency Helicopter Operations Subcommittee (IHOps)
 - o Aerial Capture Eradication and Tagging Animals Unit (ACETA)

- o Interagency Aerial Ignition Unit
 - Helitorch Subunit
- o Interagency Helicopter Operations Guide Unit (IHOG)
- o Interagency Helicopter Rappel Unit
 - Rappel Equipment Subunit
- o Helicopter Short Haul Unit

2.7 Program Overview

The Forest Service aviation program is comprised of national, regional and forest organizations.

All agency-owned and operated (WCF) aircraft are registered to the Washington Office and hosted by regions or the national office. The WO is the lead for most of the contracted aircraft used by the interagency wildland firefighting community including Large Airtankers (LATs), smokejumper aircraft, Type I and II helicopters, Aerial Supervision Module (ASM) and lead plane aircraft, infrared (IR) airplanes, aerial supervision aircraft, water scoopers and other miscellaneous aircraft. These aircraft are acquired for the primary use of the Forest Service; however, they are available for use by other federal, state, and local partners and cooperators as specified in agency policy, agreements and procedures.

Regions also contract for aircraft including, but not limited to, Forest Health Protection (FHP) airplanes, Call-When-Needed Type III helicopters, aerial tactical airplanes, and other fire and resource management aircraft.

The majority of Forest Service aviation use is for wildland fire management and support. Other aviation uses include forest health protection, wildlife survey, law enforcement, and projects related to natural resource management and administrative flights.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

3.0 Administration

3.1 General

The administration section establishes management responsibilities, policies, and procedures for the administration of the aviation program in the Forest Service.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

3.2 Reporting and Documentation Requirements

The Forest Service is responsible for providing for the following:

- Responses to Department of Agriculture [Office of Inspector General \(OIG\)](#) audits.
- Responses to Congressional inquiries.
- Meeting the requirement of the [Federal Requirement for Federal Aviation for Interactive Reporting System \(FAIRS\)](#).
- Approving and documenting senior executive travel in agency and agency-procured aircraft as required by [OMB Circular A-126](#).
- Retaining contract management records for 6.5 years.
- Complying as applicable with existing records holds and freezes for all records.
- Responding to [Freedom of Information Act](#) (FOIA) requests – All aviation records are subject to Freedom of Information Requests.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

3.3 Aviation Plans

Aviation Management Plans, with the exception of the National Aviation Safety and Management Plan (see section 3.3.1), must be approved by the appropriate line officer.

Aviation Operational Plans must be approved by the appropriate fire or aviation program manager. ([FSM 5711.04](#)). See section 3.3.10 (Aviation Operations Plans) of this document.

Regional Supplement

Each forest shall supplement this plan with a forest level aviation plan containing specific details relating to aviation operations conducted on or for the forest. Plans can be in a format established by the forest as long as they contain required information. The Forest Aviation Plan and the Forest Aviation Mishap Response Plan shall be reviewed and updated at a minimum annually by June 1st.

Forest Supplement

Placeholder.

3.3.1 National Aviation Safety and Management Plan (NASMP)

The NASMP provides information regarding Forest Service aviation organization, responsibilities, administrative procedures, and policy and is intended to serve as an umbrella document from which Regional and Forest Aviation Plans tier. The Assistant Director, Aviation will maintain a current National Aviation Safety and Management Plan ([FSM 5704.21](#)). The Director, Fire and Aviation approves all national safety and aviation management plans and addendums/changes to these plans ([FSM 5704.2](#)).

3.3.2 Regional, Northeast Area or Station Aviation Management Plans (RAMP)

Each region, the Northeast Area (NA), and Stations shall publish a RAMP that implements national policy and describes protocols specific to each regional aviation program. The RAMP serves as an umbrella document for Forest Aviation Management Plans. The regional directors shall supplement and annually update the aviation management goals, objectives, programs and activities, and strategic direction at each organizational level ([FSM 5711.04b](#)). The RAMP is approved by Regional Foresters annually.

3.3.3 Regional and Northeast Area and Station Homeland Security Response Plan

Each Region, NA, and Station must develop a Homeland Security Response Plan that details the security actions that each Region, NA, and Station will implement, based upon the Homeland Security threat level. The Regional, NA, or Station Homeland Security Response Plan must be reviewed by the Fire and Aviation Management staff, HQ Washington Office ([FSH 5709.16, Chapter 60, 52.1](#)). The Regional, NA, and Station Homeland Security Response Plans are approved by the Regional Forester.

3.3.4 Regional and Northeast Area Aviation Safety Plan

The RASM has the responsibility to prepare the Regional Aviation Safety Plan ([FSM 5720.48d](#)). The Regional, NA Aviation Safety Plan is approved by the Regional Forester/Director NA annually. Regional FHP unit aviation officers and Station Aviation Officers have the responsibility to draft FHP/Station Aviation Safety Plans that either tier to the RAMP or appear as an appendix within the RAMP.

3.3.5 Regional and Northeast Area Aviation Mishap Response Plan

Regional Foresters and/or Area Director have responsibility to ensure that every Forest Service unit that utilizes aircraft develops and annually updates, an aviation mishap response plan ([FSM 5720.48a](#)). The Regional and NA Aviation Mishap Response Plan is approved by the Regional Forester/ Director NA.

3.3.6 Forest and Station Aviation Management Plans (FAMP/ SAMP)

Forests and Stations are required to maintain and update unit aviation plans annually, which implement national and regional policy and establish local procedures and protocol. The Forest Service and Station Directors shall supplement and update annually the aviation

management goals, objectives, programs and activities, and strategic direction at each organizational level ([FSM 5711.04b](#)). The FAMP / SAMP is approved by the appropriate Forest Supervisor/ Station Director annually.

3.3.7 Facility Homeland Security Response Plan

Each aviation facility must develop a Facility Homeland Security Response Plan that is specific to that aviation facility and details the security actions the facility will take for each Homeland Security threat level. The Facilities Homeland Security Response Plan is approved by the appropriate Forest Supervisor annually.

3.3.8 Forest and Station Aviation Mishap Response Plan

Forest Supervisors, Station Directors, district rangers, and other officials designated with line authority have responsibility to ensure that every Forest Service unit that utilizes aircraft develops and annually updates, an aviation mishap response plan ([FSM 5720.48a](#)).

3.3.9 Project Aviation Safety Plans (PASP)

A PASP is submitted independent of a Forest, NA, or Station Aviation Management Plan. A PASP shall be developed and approved as required in the [FSM 5711.04](#) and [FSM 5711.1](#) for all non-emergency aviation projects.

3.3.10 Aviation Operations Plans

Operations Plans shall be developed and updated annually by the program managers. Specific Operations Plans will be developed for National Programs. Regions may supplement national operations plans as necessary. Aviation facility plans will be developed for national, regional, and forest aviation bases.

National Aviation Operations Plans will be approved by the Assistant Director, Aviation. Regional Aviation Operations Plans will be approved by RAOs. Forest/Unit Aviation Operations Plans will be approved by Forest Fire Management Officers or Fire Staff Officers.

Specific Operational Plans will be developed for national, regional or local permanent and temporary:

Airbase Operations

Helicopter operations (Exclusive Use)

- Helitack
- Rappel
- Tank/Bucket operations
- External Loads
- Night Air Operations
- Emergency Medical Short-haul

Smokejumper operations

Airtanker operations

- Very Large Airtanker
- Large Airtanker
- Scoopers
- Single Engine Airtankers (SEATs)

Scooper operations

Aerial Supervision

Light Fixed Wing operations

Unmanned Aircraft Systems Operations

Law Enforcement & Investigation operations

Forest Health Protection (FHP)

Research

Natural Resource management and protection

These plans at a minimum should include:

- Authority
- Aircraft
- Aircraft Quantity
- Funding
- Contracts
- Sustainment
- Mission Requirements
- Facilities
- SMS
- Staffing

Operations Plans shall be approved by the appropriate line officer ([FSM 5711.04](#)).

Regional Supplement

Local Operating plans are to be submitted to the RAO by June of each year to include:

- Specific Operational Plans developed for local, permanent, and temporary airbase operations.

- Recurring missions on the unit (preidentified PASP's)
- Security Plans (submit to RO on identified schedule)

Project Aviation Safety Plans (PASP). Any agency activity involving aircraft or aviation resources becomes an aviation project (except end-product contracts). Agency personnel must contact local aviation managers prior to conducting any aviation activity. Involvement of agency aviation personnel is necessary at the earliest possible planning stage.

The region has developed a recommended minimum standard template for PASP based on agency policy, SMS, and potential changes to future Forest Service policy. The template can be found at the following R1 Aviation Sharepoint site link: [R1 PASP](#)

Use of the recommended template will be considered a "best management practice" in Region 1. Plans that have already been created or for which an older format is utilized are still valid as long as they meet the required elements found in FSM5700.

Employees will review applicable aviation and safety plans before conducting aviation projects. The Regional Aviation Officer or their designee will review PASP's which are outside the scope of those projects covered by the Unit Aviation Management Plan (i.e.: higher complexity aviation projects such as projects utilizing new or unfamiliar methods or equipment, and serious or higher risk missions). Contact the RAO in determining this need if unsure. PASP's must be approved by the Line Officer with jurisdiction or oversight for the project. When appropriate, Project Aviation Safety Plans submitted to the RAO shall be not less than 5 working days prior to the start of the project. The RAO or designee will complete the review in 5 working days.

Authority for review of forest level PASPs that are of lower risk and/or complexity has been delegated to some specific Forest Aviation Officers. This delegation is not transferable by the FAO. (see appendix 10.14 RAO delegations to FAO/UAO and RASM to review PASPs).

Forest Supplement

Placeholder.

3.4 Aircrew Orientation Briefings

All Forests and Units shall create an Aircrew/Pilot Orientation Briefing Package. The Aircrew/Pilot Orientation Briefing Package serves as a source of information to provide pilots, aircrews, and Incident Management Teams. Elements of the briefing package should include:

- Leader's intent
- Local frequencies and their use (to include map if available)
- Contacts, name title, phone (may include vendor information)
- Local sunrise/sunset charts
- Local airport information (to include a map)

- Local lodging information
- Local water sources/dip sites (name, latitude and longitude, ownership, hazards, elevation, contact information)
- Helispots (name, latitude and longitude, map or aerial photo)
- Map depicting MTRs and Special Use Airspace
- IA size-up card
- Local medical evacuation information (including nearest burn and trauma centers)
- Local Search and Rescue authority, procedures, and contacts
- Flight Hazards Map (map and description)
- Airport crash rescue procedures
- Map and description of jettison areas
- Local flight following procedures (AFF and/or radio contact)
- Aviation Operations Plan
- Special considerations

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

3.5 Land Use Policy for Aviation Activities

The regulation of aviation activities on or over Forest Service managed lands is solely dependent on Land Management Plans (LMP) direction and any applicable [Federal Aviation Regulations \(14 CFR\)](#).

Temporary aviation operations on Forest Service lands may be restricted due to LMP direction. FAOs should coordinate with resource managers to identify areas of restriction when developing Operating Plans, Forest Aviation Management Plans, and [Project Aviation Safety Plans](#). When identified by resource managers, FAOs should implement any invasive species control measures for aviation activities. FAOs also coordinate reporting of any fire chemical aerial application in or near waterways.

Regional Supplement

Wilderness Areas: Helicopter use in wilderness areas must first be approved according to each specific Wilderness Plan. Longline operations will include consideration of other delivery methods before use. Longline and rappel operations are classified as helicopter landings in some wilderness areas and require approval before use. Refer to FSM2324.23, 2326.03, 2361.1 and Region 1 Supplement 2300-2008-01 2326.04c for specifics on use of aircraft on fire and other operations in the wilderness.

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3.6 Budget

Budgeting is completed on a three year cycle. Out year budget requests are submitted to Congress in the President's Budget in February, six months prior to the fiscal year for which they were submitted. The budget request is then vetted separately through the U.S. Department of Agriculture and [Office of Management and Budget \(OMB\)](#). Finally, it is then aggregated with all other agency and program requests into the President's Proposed Budget. The current year budget is finalized after congress passes an Appropriations Bill.

WO Branch Chief's shall develop OTT program/project budget proposals in early 2nd Quarter for submission to the BC, Aviation Business Operations upon request.

Aviation programs and aviation contracts funded by the Washington Office shall be approved for commitment and obligation ([FS 6500-224](#)) ONLY by the Assistant Director, Planning and Budget. Aviation programs and aviation contracts that require requests for contract action (FS 6300-4) shall be approved by one of WO FAM Deputy Directors.

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3.7 Contracting

Reference the FS Aviation Contracting Desk Reference for contracting process and procedures.

Aircraft are acquired through different types of contracts, Exclusive-Use (Ex-Use), Call-When-Needed (CWN), Indefinite Delivery/Indefinite Quantities (IDIQ), or End Product.

Exclusive-use contracts are generally used when the agency has a definite aircraft need for a specific period of time. Exclusive-use aircraft are guaranteed a minimum amount of use through a Mandatory Available Period (MAP). Daily availability is usually cheaper with exclusive-use contracts since the vendor is guaranteed a minimum amount of work.

Call-When-Needed contracts are a way for the agency to have ready access to a pool of aviation assets that meet a minimum standard, usually used for non-recurring missions or during periods of surge activity often related to wildland fire suppression. The disadvantages are that the aircraft may not be available, the agency personnel and vendor personnel don't have the same opportunity for crew cohesion that an exclusive-use crew has, and that daily availability rates are generally higher since the vendor has no guaranteed work.

IDIQ and End Product contracts are often used for projects such as aerial application of pesticides or other types of work where: 1) the precise limits of the treatment area or quantity of material is uncertain or the contract may span multiple years (IDIQ) or 2) only the desired outcome is specified and/or specific area of treatment is known (End Product). Refer to Section 3.10 for End Product Contracts.

Regional Supplement

Contractors provide approximately 90% of all FS aviation services. Each employee that uses or causes the use of contractors and cooperator-furnished aircraft is required to determine that the pilots and aircraft have been approved for the specific FS mission.

Forest Supplement

Placeholder.

3.8 Aircraft Contract Start/Modification/Extension

Aircraft contract start dates and MAP are a coordinated decision between the National Office and Regions.

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Placeholder.

3.9 Contractor Performance

All CWN and exclusive-use contractor performance will be documented in accordance with [FSH 6309.11](#). Contract Officer Technical Representatives are required to complete contractor evaluations annually using the [Contractor Performance Assessment Reporting System \(CPARS\)](#). It should be noted that [SAFECOMs](#) are not used to determine contract awards.

Regional Supplement

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Forest Supplement

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3.10 End Product Contracts

An end-product contract is intended to efficiently and effectively accomplish certain projects with no internal operational controls or specifications from the Forest Service aviation personnel. Certain aviation operations, such as aerial application of herbicides and insecticides, seed, fertilizer, prescribed burn projects, and some Burned Area Emergency Rehabilitation (BAER) projects may be administered in a more efficient and less expensive

manner if contracted on an end-product basis, instead of through a Forest Service flight services contract. Refer to [FSM 5711.2](#) for more information on end-product contracts.

Regional Supplement

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Forest Supplement

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3.11 Aircraft Acquisition

Aircraft (including UAS) transfer, acquisition, and lease shall be approved by the Washington Office Director, Fire and Aviation Management (FAM).

The Washington Office Aviation Management shall initiate all aircraft transfers, acquisitions, and leases using an Office of Management and Budget, OMB Circular A-11, Business Case (Aviation Business Case).

An Integrated Project Team will be designated to develop Aviation Business Cases.

Aviation Business Cases will be recommended by the Director, FAM and approved by the Deputy Chief, State and Private Forestry.

- a. Additional review and approvals may be required by the agency and the Department of Agriculture prior to submission to the OMB.

Aviation Business Cases for all Forest Service aircraft must be formally revalidated every 5 years.

Regional Supplement

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Forest Supplement

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3.12 Cooperator Aircraft

Cooperative aircraft operations and partnerships are encouraged in order to increase efficiency and enhance procedure standardization. The Northeastern Area, Regional Offices, and the States shall establish cooperative structures to increase capability and avoid duplication and conflicting procedures.

Use of state/local government, military, or other federal agency aircraft by Forest Service employees will require prior inspection and approval by Forest Service or OAS, usually in the form of a Cooperator Letter of Approval. Proposed use of these aircraft should be requested through the FAO to the RAO. Any employee wishing to ride on cooperator aircraft or work around a cooperator aircraft operation must consult their respective aviation manager.

Cooperator agreements for all aviation services provided to the Forest Service by other agencies and cooperators must specify levels of operational standards and safety comparable to those required of agency or contractor operations ([FSM 5710.35](#)).

When the Forest Service utilizes other governmental agency aircraft for non-fire missions, an agreement must be developed and approved to address at a minimum:

- Payment
- Operational Control
- Aircraft Management
- Performance Planning
- Mission Profile
- Landing Zones (When Applicable)
- Agreement Expiration Date
- [Public /Civil Aircraft Utilization Dispatch Work Sheet \(Public Law 103-411\)](#) (When Applicable)

Fire Missions:

- Create a resource order

Non-Fire Missions:

- Completed cost analysis
- Complete Project Aviation Safety Plan (PASP)

Military and cooperator aircraft approval shall meet the requirements in the [FSM 5713.43](#). National Guard pilots must meet the requirements identified in [FSM 5712.34.2](#).

See Appendix 10.1 for Sample Letter of Cooperator Approval. See Appendix 10.2 for Cooperator Approval Guide.

Regional Supplement

Use of cooperator aircraft require prior inspection and approval by the RAO.

Forest Supplement

Placeholder.

3.13 Aircraft Administrative Use and Reporting

Utilize the Forest Service [Administrative Use of Aircraft Desk Reference](#) to provide guidance and clarify the administrative use of aircraft.

The [USDA Property Management Regulation \(PMR\) 110-33](#) supplements Federal Management Regulation 102-33 Management of Government Aircraft. Both documents are agency wide policy for the use of Government aircraft to accomplish official business. In coordination with the [Office of Management and Budget Circular A-126](#), they restrict the

operation of government aircraft to defined official purposes: restricting travel on such aircraft, requiring special review of such travel on government aircraft by senior officials or non-federal travelers under certain circumstances, and codifies policies for reimbursement for the use of government aircraft. The transportation of passengers or cargo on Forest Service aircraft shall be limited in accordance with these Regulations.

[FSH 6509.33 301 Federal Travel Regulation](#) requires that all employees have a travel authorization for any official travel. Each instance of administrative use of a Forest Service aircraft to transport passengers must be justified, documented, and approved, and as such, will comply with the requirements contained in [FSM 5711.3](#). All documents pertaining to these flights must be maintained by Dispatch and on file for two years.

Regional Supplement

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3.14 Dispatching

3.14.1 General

All flights (other than scheduled commercial air carrier flights) will be arranged by qualified aviation dispatchers and/or appropriate aviation manager and approved at the appropriate management level.

3.14.2 Administrative Use Flight Requests

Reference the Forest Service [Administrative Use of Aircraft Desk Reference](#).

3.14.3 Mission Flight Requests

All flight requests for mission flights shall follow the [National Mob Guide, Chapter 20](#).

3.14.4 Non-Incident Related Flight Requests

Follow local procedures.

Regional Supplement

Dispatching: Follow the Regional Mob Guide, Chapter 50

Forest Supplement

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3.15 Flight Use Reporting

3.15.1 Forest Service Aviation Business System (ABS) and Aviation Management Information Systems (AMIS)

Flight time, daily availability, and other authorized charges or deductions shall be recorded on a Flight Use Report in [Aviation Business System \(ABS\)](#) ([FSM 5717.1](#)). The data shall be entered and reviewed by the Government and the Contractor's Representative.

Working Capital Fund (WCF) aircraft use is entered into the [Aviation Management Information System \(AMIS\)](#) or [Aviation Business System \(ABS\)](#) as applicable.

For Administrative Use flight reporting reference the Forest Service [Administrative Use of Aircraft Desk Reference](#).

3.15.2 Office of Aviation Services (OAS) Aviation Management Systems (AMS)

All Department of Interior (DOI) contracted aircraft utilize the OAS Aviation Management System (AMS) web based flight reporting system. The AMS application is available at <http://ams.nbc.gov>.

Regional Supplement

The DOI contract reporting system is called Aviation Information Reporting Support (AIRS).

Forest Supplement

Placeholder.

3.16 Coding and Funding of Contract, Fleet, Severity Aircraft Availability

RESERVED

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Placeholder.

3.17 Working Capital Fund (WCF) (Fleet Aircraft)

All agency-owned and operated WCF aircraft are FAA registered to USDA Forest Service, Boise Idaho. WCF aircraft are hosted by regions, but national optimal use is the primary goal to increase use and lower overall costs.

The purpose of the WCF is to provide a sustainable funding mechanism for the operation and replacement of agency owned aircraft that support fire suppression and non-fire aviation activities. WCF aircraft are subject to the same regulations regarding capitalization, de-capitalization, and depreciation as other WCF non-expendable personal property.

The Working Capital Fund Accounting Operations Handbook, [FSH 6509.11f](#) provides greater detail on how to accomplish day-to-day management, operations, and tasks, and what the WCF Aircraft User Guide will provide more aircraft specific information. Additionally, for more information regarding WCF fleet aircraft, refer to [FSM 5713.1](#).

Regional Supplement

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Forest Supplement

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3.18 Federal Excess Personal Property (FEPP)

The FEPP program refers to Forest Service owned property that is on loan to State Foresters for the purpose of wildland and rural firefighting. Once acquired by the Forest Service, it is loaned to State and local cooperators for firefighting purposes. Approximately 70% of FEPP is sub-loaned to local fire departments. For policy guidance regarding FEPP Aircraft, refer to Chapter 40 of [FSH 3109.12](#) and Chapter 40 of the [FEPP Desk Guide](#).

The RAO may:

- Review all State aviation operations plans for compliance with Forest Service and State excess property direction.
- Help establish minimum standards for pilot qualifications and maintenance for excess property aircraft.
- Coordinate and/or establish an approved source of parts for excess property aircraft, such as the Department of Defense (DOD).
- Review State security risk assessments and mitigation plans.
- Review all acquisition documents prior to transfer of aircraft.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

3.19 Program Reviews

Program reviews will be conducted jointly by Regions and the WO for regional and national office programs. The Aviation Management Review and Quality Assurance Guide and [FSM 1410](#) will be used for these reviews.

Regional Supplement

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3.20 New Project/Program/Issue Requests

A project/program/issue may include the following examples:

- New or changed aviation equipment, e.g., aircraft, parachute system, etc.
- New contractor contract change, e.g., LFS Helicopter, etc.
- New agreement or MOUs.
- New process or changed process, e.g., rappel standardization, pilot standardization, etc.
- Deviation from standards, e.g., LEI exemption, Wire Strike Protection System, etc.
- New or changed policy, e.g., doctrinal policy changes, 100 hr, turbine single engine, etc.
- New or changed procedure, e.g., rappel procedures.

The proposal is submitted to the WO Aviation Division through any of the WO Aviation Branch Chiefs or Assistant Director, Aviation. The proposal should be formatted in the Project/Program/Issue Proposal template (10.4).

The Aviation Division will socialize the proposal within the division and to the RAOs and RASMs for a minimum of 30 days with a due date for discussion.

The proponent may be asked to brief the National Aviation Team (NAT). The NAT will:

- Discuss, ask questions and come to a decision.
- The decision may be to develop or gather more information, bring the proposal back to a later meeting for a Go/No Go decision or make a Go/ No Go decision.
- A No Go decision will end the proposal.
- Notify the proponent of the decision.

The proposal is briefed by NAT staff or the proponent to the Regional Aviation Officer and Regional Aviation Safety Manager Council. The councils will:

- Discuss, ask questions and come to a decision.

- The decision may be to develop or gather more information, bring the proposal back to a later meeting for a Go/No Go decision or make a Go/ No Go decision.
- A No Go decision will end the proposal.
- Notify the proponent of the decision.
- Depending on the scope a project team may be formed by the NAT, RAO and RASMs at this step.

Depending on the scope, the proposal may be briefed to the WO Director, Fire and Aviation Management (FAM) and the Regional Fire Directors (RFD). The Director FAM and RFDs may:

- Discuss, ask questions and come to a decision.
- The decision may be to develop or gather more information, bring the proposal back to a later meeting for a Go/No Go decision or make a Go/ No Go decision.
- A No Go decision will end the proposal.
- Go decision will include the NAT, RAOs, and RASMs forming a Project Team.
- Notify the proponent of the decision.

If a Project Team is formed it may be chartered by the Director FAM depending on the scope of the proposal. The Project Team will include Subject Matter Experts (SMEs) necessary to complete a Project Implementation Plan. SMEs may include:

- Aviation Operations- WO and/or Regional
- Aviation Safety- WO and/or Regional
- Airworthiness- WO and/or Regional
- WO Pilot Standardization
- WO Aviation Business
- FAM Budget
- AQM
- Fire Operations- WO and/or Regional
- Project proponent

A Project Implementation Plan outlining the steps to plan and implement a project may include the following components:

- Business Case- if required
- Requirements Analysis- if required
- Process Change Plan- if required
- Acquisition Plan- if required.
- Communication strategy- if necessary
- Official documentation- required.

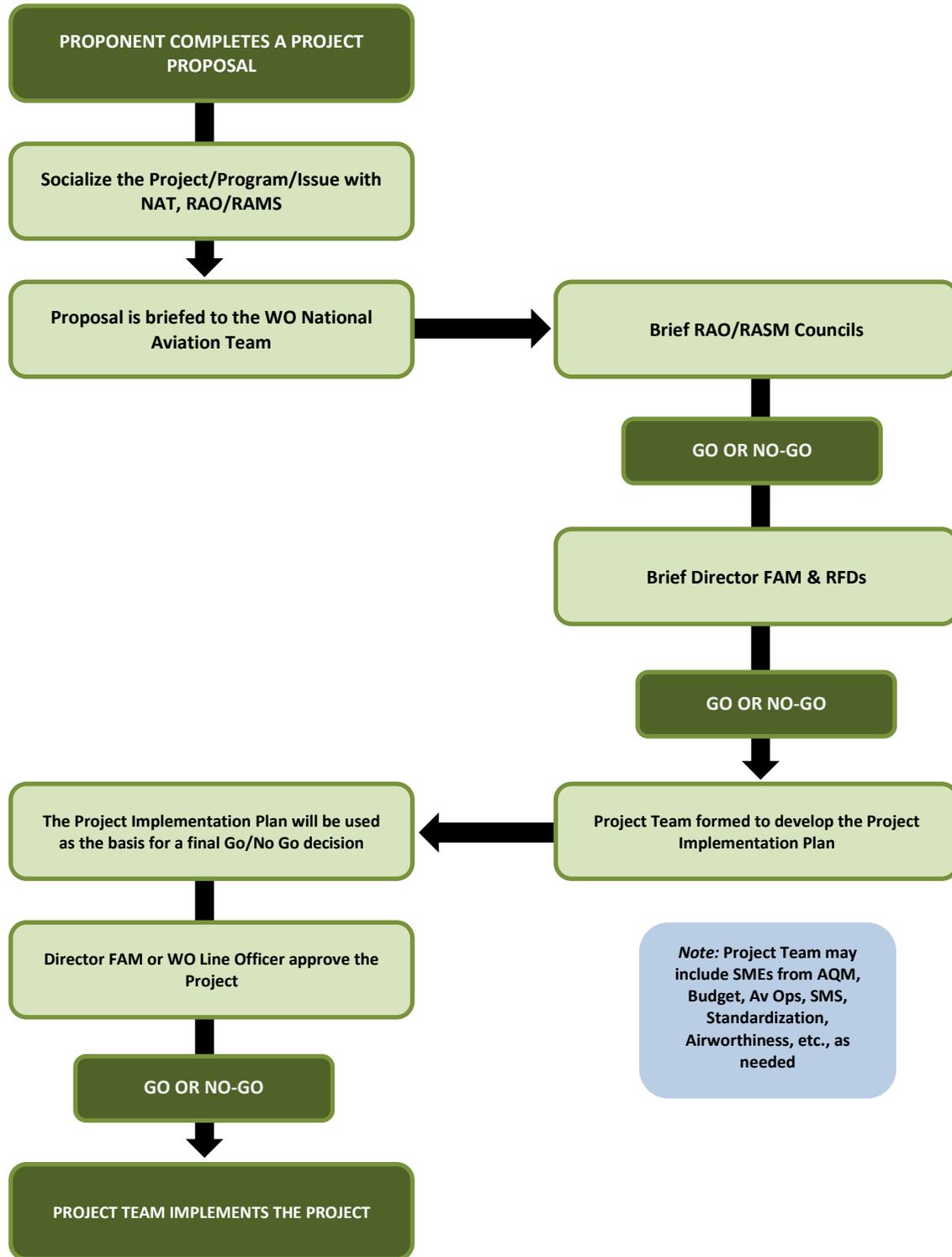
- Action Plan- required
- Quality Assurance Plan- required
- Risk Assessment (safety impact analysis, business, and financial) - a safety impact analysis is required for any aviation operations related project.

The Project will require decision approval from the Director, FAM at a minimum. Depending on the scope it may require WO Line Officer approval – Chief or Deputy Chief prior to implementation and operations.

- The decision may be a Go/ No Go decision.
- A No Go decision will end the proposal.

Implement Project as defined by the Project Implementation Plan.

AVIATION Project/Program/Issue Process



4.0 Aviation Safety Management Systems

4.1 General

Safety is the state in which the possibility of harm to persons or property damage is reduced to, and maintained at or below, an acceptable level through continuing processes of hazard identification and risk management.

It (safety) must be a core value of our culture, ingrained in the character of every employee. As an agency, we must endeavor to place the safety of our co-workers and ourselves above all else. This obligation requires integrity, trust, and leadership: the integrity of every employee to adhere to Agency standards, the trust in our leaders to place safety as the first priority, and leadership at all levels to provide a culture that encourages employees to communicate unsafe conditions, policies, or acts that could lead to accidents without fear of reprisal (Chief's Safety Policy, August 27, 2009).

This commitment to safety will be reflected as doctrine within aviation safety management. The adoption of SMS continues the application of Forest Service Doctrine. SMS is not a safety program; rather it is a system which aligns, assesses, and organizes an organization's existing safety processes around the concept of system safety. SMS incorporates a proactive approach using hazard identification and risk management to achieve accident prevention.

Regional Supplement

The Region plans to conduct an SMS Gap Analysis and charter a working group with the goal of receiving an IS-BAO audit.

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4.2 Safety Management Systems (SMS)

SMS offers a complimentary solution based on structuring the existing rules and continuous review of the efficacy of those rules. Thus, the system ensures that guidance and regulation meet the original intent and that they have no unforeseen adverse side effects. SMS can be considered as functioning like a filing system, which structures the organization's existing safety initiatives and provides a review process for how well those initiatives function. SMS is divided into four components: Policy, Risk Management, Assurance, and Promotion.

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4.3 Policy

SMS is a critical element of management responsibility in determining the agency's safety policy and SMS also defines how the agency intends to manage safety as an organizational core function.

- Policy guides aviation safety doctrine, philosophy, principles and practices.
- Policy provides framework for aviation plans (refer to section 3.3 of this document).
- Policy assists in the development of local standard operating procedures.
- Policy will foster and promote doctrinal principles and safety management systems within the Regions.

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4.4 Risk Management

To provide structure to control risk in operations, a formal system of hazard identification and safety risk management is essential. The risk management process is designed to manage risk to acceptable levels by the identification, assessment, and prioritization of risks followed by coordinated application of resources to minimize, monitor, and control the probability and/or impact of undesirable events.

The agency:

- Will define a process for risk acceptance that defines acceptable and unacceptable levels of safety risk; establishes descriptions for severity levels, and likelihood levels.
- Will define specific levels of management that can make safety risk acceptance decisions.
- Will define acceptable risk for hazards that will exist in the short-term while safety risk control/mitigation plans are developed and executed.
- Will establish feedback loops between assurance functions to evaluate the effectiveness of safety risk controls.

There are necessary steps in the Risk Management Process.

- Define Objectives (i.e., Strategic program analysis, change management, accident action plan, other).
- System Descriptions: Identify each system-component that contributes to the mission.

Risk assessment is a step in the risk management process. Risk assessment is the determination of hazards associated with a situation or activity.

There are necessary steps in the risk assessment process as outlined in the [FS Aviation Safety Management System Guide](#):

1. Define Objectives (i.e., System and task analysis).
2. System Descriptions: Identify each system – component that contributes to the mission. Consider change management in systems.
3. Hazard Identification: Brainstorm all possible failures, threats, and danger points.
4. Risk Analysis: Disassemble the hazard to identify outcomes, impacts of a hazardous event, and degree of exposure to risk. (Ask the question: If this hazard exists, then what happens?)
5. Risk Assessment: Evaluate the combined effects of the potential for injury, damage, fatality, etc. based upon severity and likelihood of an event occurring.
6. Decision Making: Determine mitigations needed, conduct cost/benefit analysis, develop an action plan, and implement controls. (This is risk management).
7. Validation of Control: Monitor controls and supervise operations to determine if controls are effective.

Risk assessment can be divided into three levels:

- *Time Critical*. This method of risk management is an “on-the-run” mental or verbal review of the situation using the Operational Risk Management (ORM) process without necessarily recording the information. Many of the skills used in this context are applicable to normal mission where deliberate risk management has occurred and crews must manage risk in a dynamic situation. Note that “time critical” does not mean “hasty” or “uninformed.”
- *Deliberate*. This ORM method is used with adequate planning time and may involve more than one system at its source. It involves a systems identification, hazard identification, risk assessment/analysis, consideration of control options and risk decision making, implementation of controls, and supervision. This method will involve documentation of the process and actions. Examples of the tools in use for ORM are project aviation safety plans (PASP) and job hazard analysis (JHA).
- *Strategic/In-Depth*. Strategic Risk Management (SRM) is conducted at the highest levels of the organization and is typically applied to “systems of systems” type complexity, and requires more sophisticated techniques and professional reviews. A system or task description should completely explain the interactions among the software, hardware, environment, and live ware (e.g. SHELL model) that make up the system in sufficient detail to identify hazards and perform risk analysis.

This method should be used in instances where an entire program-wide assessment is deemed necessary; new technology or a change in process is being proposed; or when risks appear consistently high in a specific functional area. The strategic

process produces a permanent record of findings and decisions used for long term planning, organizational decision-making and as authoritative training resources.

Note: The SRM process shall not preclude employees or contractors from taking interim immediate action to eliminate or mitigate existing safety risk when and where it is recognized that urgent action is required.

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4.5 Assurance

The safety assurance component involves processes for quality control, mishap investigation, and program reviews.

- Provide aviation safety oversight and review through active field presence and encourage a reporting culture between management and aviation.
- Monitor established standards and procedures and make corrections as needed.
- Monitor accident and incident trends, and implement appropriate prevention action.
- Report accidents and incidents with potential in accordance with the local emergency response plan.
- Conduct accident and incident investigations.
- Provide guidance, coordination, and monitoring of safety evaluations conducted by the Regional aviation staff and Forest/Unit Aviation Officers.
- Provide assistance in aviation activities to ensure best practices and procedures are understood.
- Promote and provide corrective action on [SAFECOM](#) reports, develop trend analysis and communicate lessons learned.
- Review aviation accident and incident reports and follow-up on action items.

QA techniques can be used to provide a structured process for achieving objectives. Forest Service efforts to date have concentrated on the development and implementation of comprehensive doctrine/policy revision, risk management processes, SMS promotion and training.

All effort should be made to focus corrective action as specifically as possible.

4.5.1 Aviation Safety and Technical Assistance Team (ASTAT)

During increased levels of wildland fire activity, an [Aviation Safety and Technical Assistance Team](#) assures safety by providing (1) on-the-spot safety and technical assistance to aviation operations and (2) a conduit through which the field can communicate to Fire and

Aviation Management. When conducting reviews, an ASAT team should follow direction as stated in:

- [Forest Service Aviation Safety Management System Guide](#)
- [FSM 1410](#)
- [Interagency Standards for Fire and Fire Aviation](#)

Regional Supplement

RISK MANAGEMENT:

A Flight Risk Assessment Tool (FRAT) is a generic term for an aid to conducting one form of rapid risk management. Such elements as fatigue, weather, operational tempo, urgency, etc. are generally covered in FRATs. A GAR (Green Amber Red) and a DORA (Day Of Risk Assessment) are specific examples.

The use of FRATs are considered a “best management practice”. As per the following recommended guidelines, aviation programs are encouraged to:

- Utilize FRATs prior to flight operations
- Modify FRATs to best fit their operations
- Develop standard operating procedures (SOPs) to conduct/incorporate FRATs into daily use, including measures by which to address changes to conditions.
- Involve as many elements of the aviation team (pilot, dispatch, manager, crew) as practical in the risk management process
- Record and retain copies of FRATs
- Review completed FRATs routinely as part of AARs and trend analysis

AVIATION SAFETY and TECHNICAL ASSISTANCE TEAMS (ASTAT)- These teams will be formed as necessary to perform safety and/or quality assurance on incident operations. The teams will be instructed to follow the regional standard ASTAT Handbook. (see appendix 10.18: R1 ASTAT handbook)

4.5.2 Aviation Safety Communiqué–SAFECOM

[SAFECOM](#)s fulfill the Aviation Mishap Information System (AMIS) requirements for aviation mishap reporting for the Forest Service. The SAFECOM reports any condition, observance, act, maintenance problem, or circumstance which has the potential to cause an aviation-related mishap ([FSM 5720.46](#)). The SAFECOM system is not intended for initiating punitive actions. Submitting a SAFECOM is not a substitute for “on-the-spot” correction(s) to a safety concern. It is a tool used to identify, document, track and correct safety related issues. This form is located on the SAFECOM web page, Interagency

SAFECOM System. All personnel involved in aviation activities are encouraged to submit SAFECOMs when they feel such action is warranted.

4.5.3 Aircraft Accident Investigation Process

The [National Transportation Safety Board \(NTSB\)](#) is responsible for investigating all Forest Service aviation accidents. Concurrently, and as a party-to-the-investigation, the Forest Service Aviation Investigation Team utilizes the [Aircraft Accident Investigation Guide](#) in order to conduct an additional safety investigation review of Forest Service management and policy issues. The aviation investigation team completes a Safety Investigation Report (SIR) for the Branch Chief, Aviation Safety. This report is briefed and vetted through aviation subject matter experts, and aviation safety improvement recommendations are developed. These recommendations can then be shared with a Learning Team for the purpose of generating a comprehensive report for the Learning Review Board (LRB). The Critical Response Protocol Guide provides Learning Team protocols and direction for the LRB.

4.5.4 Forest Service Strategic Risk Assessment Close-Out Process

Once the Strategic Risk Assessment has been completed, and the Assistant Director, Aviation and Assistant Director, Risk Management will deliver the final product to the Director, Fire and Aviation Management. The Director will provide direction for the risk assessment report to be reviewed. The Strategic Risk Assessment Close-out Working Group (SRACOW) will establish a Subject Matter Expert (SME) group of no more than five SMEs. The SME group will be given direction, parameters and timelines to review the report; identify mitigations that are one time effort and those that are on-going; assess individual mitigation's effectiveness and implementation cost and to develop a Quality Assurance (QA) checklist for long-range monitoring. The SME group will provide the SRACOW with these products in the established timelines. The SRACOW will review and either accepts the SME products or a back and forth coordination will begin to develop acceptable products. Once the SRACOW agrees on an acceptable QA checklist, the SRACOW will provide the Assistant Director, Aviation and Assistant Director, Risk Management with documentation on the completion of the project. The Assistant Directors will deliver the final product to the Director of Fire and Aviation for Deputy Chief, State and Private Forestry signature. Strategic Risk Assessments should be closed out and formally completed no later than one year from the date of tasking to the SRACOW. A bulleted representation of the process is below:

- Aviation Strategic Risk Assessment completed and assigned to the SRACOW with the expectation of being formally closed out within one year. (Director FAM)
- Develop SME Group and provide clear direction of assigned tasks. (SRACOW)
 - Identify on-going and one time mitigations and assess their viability. (SME)
 - Develop QA Checklist. (SME)
 - Provide products back to SRACOW. (SME)
- Review, validate and either accept or return SME products. (SRACOW)

- o Pass Back Process if needed.
- Once acceptable products are developed, formally complete and close out the risk assessment through documentation to the Assistant Director, Aviation and the Assistant Director, Risk Management. (SRACOW)

4.5.5 Project Aviation Safety Planning (PASP)

Accident prevention is paramount when planning individual aviation operations. PASPs are not required for incident aviation operations or point to point / administrative use flights.

Prior to commencing non-emergency aircraft operations, or aircraft operations outside the scope of an approved training program, the Regional Directors, Area Director, Forest Supervisors, and Station Directors shall develop and document a Project Aviation Plan including a PASP that will be reviewed by the RAO ([FSM 5704.31](#)). It is strongly recommended that an aviation safety manager be included in the review process. An appropriate line officer shall approve all Aviation Plans per direction in [FSM 5704.21](#).

Regional Supplement

(See section 3.3: Aviation Plans for requirements of project aviation safety planning)

SAFETY ASSURANCE (Internal Evaluation Program)

Safety assurance is a means of determining compliance with safety standards and to detect unsafe conditions prior to experiencing a mishap involving possible loss of life, personal injury, or property damage.

A. Formal evaluations are accomplished using a team of FS, interagency and/or industry aviation and management officials to conduct surveys, audits, and reviews. The evaluation team is responsible for providing the operational unit and its managing organization with a written report of its findings and is responsible for developing and implementing an action plan that addresses the findings and recommendations contained in the report. These evaluations should be conducted periodically at each established aviation base.

B. Informal evaluations are conducted on a more frequent basis and are performed by aviation specialists during field assistance visits to Forests and Grasslands, aviation bases, incident bases, and projects. In all cases, follow-up includes all subsequent activity needed to see that corrective actions are taken.

REPORTING AND FEEDBACK:

If a mishap involves damage or injury, notify the appropriate Regional Aviation Safety Manager immediately by the most expeditious means available.

Do not fly on any aircraft with a maintenance deficiency or in an aircraft involved in an incident/ accident until the WO or RO Interagency Aviation Maintenance Inspector has

returned the aircraft back to contract availability (for contracted aircraft) or airworthy status (for FS owned aircraft).

If the aircraft has been involved in an incident, or there is any doubt as to its airworthiness, do not fly on the aircraft until consulting an Interagency Aircraft Maintenance Inspector.

Non-scheduled aircraft maintenance or repairs require that the appropriate Regional Aircraft Maintenance Inspector be notified before the aircraft is returned to contract availability.

SAFECOM INSTRUCTIONS:

A. Processing:

Once a SAFECOM comes to the attention of the appropriate FAO/UAO, corrective action(s) and comments should be documented on the form. It is incumbent on the FAO/UAO to quickly process SAFECOMs so that distribution and dissemination to aviation users and managers may be accomplished.

B. Dissemination:

Timely distribution of SAFECOMs is a key component in mishap prevention. SAFECOMs may be accessed and printed from the "Public Access" area of the database. FAO/UAOs and the appropriate RASM should be contacted if additional information or follow-up action(s) is required.

Forest Supplement

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4.6 Promotion

The organization must promote safety as a core value with practices that support a positive safety culture. Safety promotion can be accomplished through safety awards, education, and communication.

- Training
- Communication
- [Lessons Learned Website](#)
- Reporting and Feedback
- Safety and Mishap Information
- Safety Awards

The desired positive Safety Culture is informed, flexible, learning, just and is a reporting culture that captures employee operational knowledge and experience. The end result of this cultural shift is to achieve the status of a High Reliability Organization (HRO).

4.6.1 Human Factors

Human error is the single area, which if possible to eliminate or reduce, would provide the greatest benefit in accident prevention. Human behavior is so complex that it is unrealistic to think that human error can be eliminated. When fully implemented, SMS provides and promotes a positive Safety Culture which can reduce the impact of human error.

4.6.2 Aviation Safety Awards Program

Aviation Safety Awards are a positive part of the aviation program and are provided to all levels with the Forest Service organization. National awards are given following the guidelines in [FSM 5724](#) for pilots and employees.

Regional Supplement

The Region strongly supports awards for safe aviation operations. A number of options are available to recognize individuals and organizations for contributing to a positive aviation safety culture for the organization. Awards should be discussed with the RASM to determine appropriate award elements.

Some awards have submission date requirements as shown below.

Washington Office Aviation Management Awards End of February

Regional Forester's Honor Awards – End of June

Chief's Awards- End of May

ICAP Federal Aviation Awards- End of May

Forest Supplement

Placeholder.

4.7 National Fire and Aviation Operations Alert System

RESERVED

5.0 Aviation Operations

5.1 General

It is the responsibility of each employee, cooperator, and contractor to conduct aviation operations that have been approved by management, planned properly, utilizes the correct equipment, use qualified personnel, and insure that the risk has been mitigated to an acceptable level.

Forest Service employees are often challenged by working in very high-risk and dynamic environments that are not always predictable. This responsibility can only be realized through participation of every employee.

Safety is the first priority and leadership at all levels must foster a culture that encourages employees to communicate unsafe conditions, policies, or acts that could lead to accidents without fear of reprisal.

The four components of SMS (Policy, Risk Management, Assurance, and Promotion) are critical to the success of safe operations.

Regional Supplement

Forest Service employees may use only aircraft and pilots that have been properly approved (FSM 5703.1 and 5720.3.4). Contract or cooperator aircraft will display an Aircraft Data Card or letter of authorization in the aircraft. Contract and cooperator pilots are required to present a Pilot Qualification Card or letter of authorization listing the missions they are approved to fly. Passengers have the responsibility to request to see these documents and to confirm that the aircraft and pilot are current for the intended mission.

Policy:

1. Each flight will be planned and executed in a safe manner. Safety considerations will take precedence over costs or mission accomplishment. (FSM 5720)

2. Preflight inspection and preflight planning is mandatory. Proper flight planning will include a thorough weather briefing, NOTAM briefing, Military Training Routes (MTR), and Temporary Flight Restrictions (TFR) check, and the acquisition of appropriate maps and communications (frequency) plans.

3. Aircrew proficiency, currency, training, and standardization will receive high priority in an effort to prevent pilot error mishaps. Regional flight operations and training plans are in development and will be implemented as “best management practices” (see appendix 10.17: R1 Pilot Training and Operations Guide).

GROUND OPERATIONS

Ground crews assigned to support aviation either directly or indirectly will be properly qualified for the specific assignment and will be briefed on the mission.

Forest Supplement

Placeholder.

5.2 Manuals, Handbooks, and Guides

5.2.1 Manuals

Aeronautical Information Manual (AIM): Issued by the Federal Aviation Administration; copies are available from the Government Printing Office and commercial sources. Also available at: https://www.faa.gov/air_traffic/publications/

Rotorcraft Flight Manual (RFM): The original equipment manufacturer's manual is available in each aircraft operated by the agency.

Airplane Flight Manual (AFM): The original equipment manufacturer's manual is available in each aircraft operated by the agency.

Federal Aviation Administration Commercial Pilot Practical Testing Standards (PTS): Rotorcraft or Airplane as appropriate. Available at: https://www.faa.gov/training_testing/testing/test_standards/

FSM 5700 Aviation Management: Available at: http://www.fs.fed.us/cgi-bin/Directives/get_dirs/fsm?5700

5.2.2 Handbooks

FSH 5309.11 – Law Enforcement Handbook, Chapter 50 – Actions and Procedures: Available at: https://fs.usda.gov/FSI_Directives/5309.11_50.doc.

FSH 5709.16 Aviation Management and Operations Handbook: Available at: http://www.fs.fed.us/cgi-bin/Directives/get_dirs/fsh?5709.16

FSH 6709.11 Health and Safety Code Handbook: Available at: http://www.fs.fed.us/cgi-bin/Directives/get_dirs/fsh?6709.11.

Military Use Handbook: Available at: http://www.nifc.gov/nicc/predictive/intelligence/military/Military_Use_Handbook_2006_2.pdf.

Pilot's Operating Handbook (POH): Also known as the FAA Approved Airplane Flight Manual; available in each aircraft operated by the agency.

5.2.3 Forest Service Guides

The most recent Forest Service approved version of the following guides supersedes all previous versions. Forest Service National Guides shall be approved in writing by the Deputy Chief, State & Private Forestry.

Accident Investigation Guide: <http://www.fs.fed.us/t-d/pubs/pdfpubs/pdf05672806/pdf05672806dpi72pt01.pdf>.

Aircraft Accident Investigation Guide: Available from Branch Chief, Aviation Safety until published within an updated Aviation Safety Management System Guide.

Aircraft Inspection Guide: Available from the Washington Office Detached Unit, Boise agency aviation staff. Available at: http://www.fs.fed.us/fire/aviation/av_library/AIG_2008.pdf

Air Card Guide

Aviation Safety Management System Guide: http://www.fs.fed.us/fire/av_safety/

Federal Excess Personal Property (FEPP) Desk Reference Guide:
http://www.fs.fed.us/fire/partners/fepp/desk_guide/chap40.html

Fire and Aviation Qualifications Guide:
<http://www.fs.fed.us/fire/publications/fsfaqg/fsfaqg.pdf>.

Helicopter Flight Evaluation Guide (HFEG): Available from the Washington Office Detached Unit, Boise agency aviation staff.

National Law Enforcement and Investigations (LEI) Short-Haul and Hoist (S-H/H) Guide

National Rappel Operations Guide:
http://www.fs.fed.us/fire/aviation/av_library/NROG/USFS%20NROG%202013.pdf

Professional Helicopter Pilot Guide:
http://www.fs.fed.us/fire/aviation/av_library/professional_helic_pilot_guide.pdf

Security Standard Requirements Guide: Available from aviation management staff, Washington Office, 1400 Independence Avenue SW, Washington, DC 20250.

Special Mission Airworthiness Assurance Guide:
http://www.fs.fed.us/fire/aviation/av_library/FS%20Special%20Mission%20Airworthiness%20Assurance%20Guide_Revision1_12_7_2011.pdf.

WCF Aircraft User Guide:
http://www.fs.fed.us/fire/aviation/av_library/Final_WCF_User_Guide_June_2010.pdf

Forest Service National Rappel Operations Guide:
http://www.fs.fed.us/fire/aviation/av_library/NROG/USFS%20NROG%202013.pdf

Operations and Safety Procedures Guide for Helicopter Pilots:
http://www.nifc.gov/aviation/av_documents/av_helicopters/SafetyBrief.pdf

5.2.4 Forest Service Aviation Operations Plans

The most recent Forest Service approved version of the following operational plans supersedes all previous versions.

- **Emergency Medical Short-Haul Operations Plan**
- **Modular Airborne Firefighting System (MAFFS) Operating Plan**
- **Night Air Operations Plan**

- **Water Scooper Aircraft Operating Plan**
- **Airtanker Operations Plan**
- **Aircraft Coordination Operations Plan**
- **National Rappel Operations Guide**
- **Unmanned Aircraft Systems Operations Plan**

5.2.5 Interagency Aviation Operational Guides

The most recent Forest Service approved version of the following guides supersedes all previous versions. Interagency Guides utilized by the Forest Service shall be approved in writing by the Deputy Chief, State & Private Forestry.

Cooperator Aircraft and Pilot Approval Guide for Interagency Fire:

http://www.fs.fed.us/fire/aviation/av_library/COOP%20NASF%20Standards.pdf

Interagency Aerial Ignition Guide (IAIG):

http://www.nwcg.gov/sites/default/files/products/PMS501_2015.pdf

Interagency Aerial Supervision Guide (IASG):

<http://www.nwcg.gov/publications/interagency-aerial-supervision-guide>

Interagency Airplane Pilot Practical Test Standards:

https://www.doi.gov/sites/doi.gov/files/migrated/aviation/tech/upload/Airplane_Pilot_Practical_Test_Guide_2012.pdf

Interagency Airspace Coordination Guide (IACG):

http://www.airspacecoordination.org/guide/asguide_full.pdf

Interagency Airtanker Base Operations Guide (IABOG):

<http://www.nwcg.gov/publications>

Department of Interior Aviation Life Support Equipment (ALSE) Handbook:

https://www.doi.gov/sites/doi.gov/files/migrated/aviation/library/upload/Aviation_Life_Support_Equipment_Handbook_2008.pdf

Interagency Aviation Mishap Response Guide and Checklist:

https://www.doi.gov/sites/doi.gov/files/migrated/aviation/safety/upload/IAMRGC_PMS503.pdf

Interagency Aviation Training Guide (IAT): Also available at:

https://www.iat.gov/docs/IAT_Guide_2014_0331.pdf

Interagency Aviation Transport of Hazardous Materials Guide:

https://www.doi.gov/sites/doi.gov/files/migrated/aviation/library/upload/HAZMAT_Handbook_2005-2.pdf

Interagency Helicopter Operations Guide (IHOG):

<http://www.nwcg.gov/publications>

Interagency Helicopter Pilot Practical Test Standards:

http://www.fs.fed.us/fire/aviation/av_library/ihpts.pdf

Interagency Helicopter Rappel Guide (IHRG):

http://www.nifc.gov/PUBLICATIONS/ihrg/Interagency_Helicopter_Rappel_Guide_2011.pdf.

Interagency Single-Engine Airtanker Operations Guide (ISOG):

<http://www.nwccg.gov/publications>

Interagency Smokejumper Operations Guide (ISMOG):

http://www.fs.fed.us/fire/aviation/av_library/ismog/ismog-fs.pdf

Interagency Smokejumper Pilots Operations Guide (ISPOG):

http://www.fs.fed.us/fire/aviation/av_library/ISPOG.pdf

Interagency Standards for Fire and Aviation Operations (annual revision):

https://www.nifc.gov/policies/pol_ref_redbook_2015.html

NASF Cooperators Aviation Standards for Interagency Fire:

http://www.fs.fed.us/fire/aviation/av_library/COOP%20NASF%20Standards.pdf.

National Interagency Mobilization Guide (annual revision):

<http://www.nifc.gov/nicc/mobguide/index.html>.

5.2.6 Other References

Administrative Use of Aircraft Desk Reference

Regional UAS Desk Guides:

<http://fsweb.wo.fs.fed.us/fire/fam/aviation/uas/uasflights.htm>

Aviation Risk Management Workbook:

http://www.fs.fed.us/fire/av_safety/risk_management/ARMW%20Individual%20Files/ARM_2011W.pdf

Foundational Doctrine Fire and Aviation Rotor and Wing January 2006:

http://fsweb.wo.fs.fed.us/fire/fam/aviation/foundational_doctrine_fam_2006.pdf

Interagency Airtanker Base Directory: Available from the Washington Office Detached Unit, Boise Great Basin Cache, as National Fire Equipment System (NFES) Order Number 002537.

National Aviation Safety and Management Plan:

http://www.fs.fed.us/fire/aviation/av_library/

Regional Supplement

5.2.4 Forest Service Aviation Operations Plans

National Aviation Safety and Management Plan Regional Supplement: Available at:
http://gacc.nifc.gov/nrcc/dispatch/aviation/NASMP_w_RegionalSupplementFinal.pdf

Northern Region Water Scooper Operations Plan: Under Development.

Northern Rockies Interagency SEAT Operating Plan: Under Development.

Forest Supplement

Placeholder.

5.3 Public/Civil Aircraft Operations

Forest Service aviation activities include both “civil” and “public” operations. Civil aircraft operations shall comply with [FSM 5703.32](#). Public aircraft operations shall comply with [FSM 5703.31](#).

5.3.1 Civil Aircraft

All Forest Service aircraft operations are civil unless specifically declared public. All aircraft other than public aircraft are considered civil aircraft ([FAR1.1](#)).

5.3.2 Public Aircraft

The definition for Public Aircraft can be found in the [FSM 5705](#). The Forest Service will comply with all 14 Code of Federal Regulations (14 CFR) Federal Aviation Regulations in the operation and maintenance of public aircraft with the few exceptions outlined in [FSM 5714](#).

Regional Supplement

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Forest Supplement

Placeholder.

5.4 Employees on Unapproved Aircraft

All agency employees will comply with Forest Service aviation policies when performing agency employment-related duties on board any organization’s aircraft and/or aircraft operated under any other organization’s operational control. Employees shall be mindful of policy and the appropriate approval level for any deviation from policy. These policies include, but are not limited to: approved aircraft and pilot (carding or letter of approval), PASP, flight following, PPE, and appropriate management.

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5.5 Aviation Emergency Response

In unusual circumstances, Forest Service personnel may perform a flight in non-approved aircraft with non-approved pilots ([FSM 5713.53](#)). The Regional Forester may authorize this flight based on advisement and recommendation from the Regional Aviation Officer and counsel from the Regional Aviation Safety Manager.

A mission Risk Assessment (RA) shall be completed and approved by the appropriate Line Officer prior to the flight(s). The [Green-Amber-Red \(GAR\) Model Risk Assessment](#) is an example of an appropriate aviation risk assessment to utilize in an aviation emergency response situation.

These flights shall be documented on form FS-5700-14, [SAFECOM](#): Aviation Safety Communiqué and submitted to the appropriate aviation manager.

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5.6 Flight Planning

5.6.1 Point-to-Point

Point-to-Point flights will be tracked by either an FAA – VFR (Visual Flight Rules), IFR (Instrument Flight Rules) Flight Plan, or agency flight plan. Minimally, there must be notification to Dispatch Centers upon departure and arrival.

5.6.2 FAA Flight Plans

FAA Flight Plans are filed by the pilot, opened in flight upon departure, and closed by the pilot with FAA Air Traffic Control (ATC) or Flight Service upon arrival.

5.6.3 Agency Flight Plans

Agency flight plans for point-to-point flights are documented on a Flight Request/Flight Schedule form. The procedures for accomplishing agency flight tracking are documented in detail in the [National Interagency Mobilization Guide](#).

5.6.4 Flight Hazard Maps

The Aviation Flight Hazard Map Product Description Sheet, located at the following link, describes standard and optional map elements used to build an NWCG-standard local unit Flight Hazard Map: <http://www.nwcg.gov/committees/geospatial->

[subcommittee/resources/documents/aviation-hazards/aviation-flight-hazard-map-product-description-sheet](#)

Regional Supplement

Point-to-Point Flights. Forest Service and OAS do not inspect point-to-point only aircraft. These aircraft are approved and operated under CFR 14-Part 135. These aircraft are not approved for special mission use. Pilots authorized for point-to-point only are issued a card valid for two years identifying the aircraft for which they are authorized. FSH 5709.16 14.12

Hazard Maps

1. Each unit will maintain a current flight hazard map. Copies of this map shall be available and displayed for use at each location where flight planning, flight tracking, aircraft dispatch, or flight mission briefings occur. Examples of locations are; dispatch offices, permanent aircraft bases, temporary helibases, or special project sites. Geographical Information System (GIS) should be utilized if possible. A flight hazard layer should be built which depicts the local hazards.
2. Particular attention shall be placed on hazards in the approach and/or takeoff patterns of heliports, helispots or airstrips; and lines, which cross drainages. Examples include transmission lines, wires and cables; television translators, microwave stations, and towers. Medical facilities with landing areas or heliports should be shown on the hazard map. Those with air ambulance capability should also be indicated.
3. Airports, landing strips, heliports, maintained helispots, known avoidance areas, specific flight hazards, MTRs, MOAs, TFRs and SUA's should be indicated.
4. Temporary hazards, such as blasting, shall be marked and noted with legal information, such as name of contact, radio frequency, legal location, dates and/or time in effect.
5. All personnel are responsible for reporting aerial hazards to the UAO/FAO as the designated point-of-contact for inclusion of information on the hazard map.
6. Hazard maps shall be updated annually. Each map will include the date it was created and/or updated. Unit or Forest Aviation Officers are responsible for the development and update of Aerial Hazard Maps. A link to the unit's hazard maps should be provided to NRCC Aviation by June 1st.
7. Aircraft/project managers and pilots shall review flight hazard maps prior to initiating flight operations.

Forest Supplement

Placeholder.

5.7 Flight Following

5.7.1 Mission Flight Following

All Forest Service flight activities, except those activities conducted under IFR flight plans (14 CFR 91.173) or which are under positive control with air traffic control (ATC), shall be coordinated through an originating dispatch office during its hours of operation in accordance with FSH5709.16 Chapter 33.11.

AFF is the preferred method of agency flight following but shall not preclude the use of radio flight following as an alternate means. [Automated Flight Following \(AFF\)](#) does not reduce or eliminate the requirement for FM radio capability and radio communication. Reference Chapter 20 of the [National Interagency Mobilization Guide](#) for Flight Following Requirements and Procedures.

The method of flight following for Fire incidents is documented on an Aircraft Resource order or in a Dispatch Center's Mobilization/Operating Guide. The method for flight following non-fire resource missions will be documented in a Project Aviation Safety Plan (PASP) and/or Flight Request/Flight Schedule form.

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Placeholder.

5.8 Radio Frequency Management/Communications

RESERVED

Do not use any frequency without proper authorization from the authorized radio frequency management personnel at the local, state, regional or national level.

Regional Supplement

Placeholder.

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5.9 Latitude and Longitude Formats

The aviation standard for communicating latitude and longitude shall be: Degrees Decimal Minutes (also known as Degrees Minutes, Decimal Minutes, or Degrees Minutes Tenths) i.e., 48°36.12'N 114°08.12'W. Ground units must ensure their GPS is set to Degrees Decimal Minutes before providing coordinates to aircraft.

There is also a format specific to the [Interagency National Mobilization Guide](#), for requesting TFRs, which is an exception to the above formats. An example would be 483612N/1140812W (uses no punctuation at all with degrees, minutes and seconds).

Reference the [Latitude/Longitude Information for GPS Navigation Information Bulletin FS-10-02](#) for more information.

Regional Supplement

The Region 1 standard for expressing latitudes and longitudes will be degrees decimal minutes whenever practical.

5.10 Overdue or Missing Aircraft

An aircraft is considered “overdue” when it fails to arrive within 30 minutes after the Estimated Time of Arrival (ETA) and cannot be located.

An aircraft is considered “missing” when its fuel duration has been exceeded, it has been reported as “overdue” to the FAA and the FAA has completed an administrative search for the aircraft without success.

If an aircraft is missing, overdue, or downed, initiate the [Interagency Mishap Response Guide and Checklist](#).

Regional Supplement

OVERDUE OR MISSING AIRCRAFT

A. Aircraft. Overdue aircraft must be reported in accordance with local/Regional protocol. An aircraft is considered “Overdue” when the pilot fails to check-in within the time frame specified in the agency’s flight following request, or when an aircraft operating on an FAA (VFR) Flight Plan, fails to arrive within 30-minutes past ETA, and its location cannot be established. .

B. In the event that a FS owned, leased, or contracted aircraft is determined to be overdue (30-minutes after ETA at destination, or if 2 successive periodic checks are unsuccessful the dispatcher will follow procedures in the Aircraft Mishap Response Plan (Aircraft Crash, Search, and Rescue Guide).

C. Flight Service Station Notification. FAA Flight Service Station
Dial 1-800-992-7433 or 1-800-WXBRIEF

D. The FSS may require the following information:

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> Reported by: | <input type="checkbox"/> Agency: |
| <input type="checkbox"/> Phone: | <input type="checkbox"/> Flight Plan (type): |
| <input type="checkbox"/> Operator: | <input type="checkbox"/> Pilot’s Name: |
| <input type="checkbox"/> Aircraft #: | <input type="checkbox"/> Aircraft Type: |

- | | |
|---|---|
| <input type="checkbox"/> Aircraft Color: | <input type="checkbox"/> Number Aboard: |
| <input type="checkbox"/> Departure Point: | <input type="checkbox"/> Departure Date/Time: |
| <input type="checkbox"/> Route: | <input type="checkbox"/> Destination: |
| <input type="checkbox"/> ETA: | <input type="checkbox"/> Fuel on Board |

E. Missing Aircraft Definition. An aircraft is considered “Missing” when it has been reported to a FSS as being “Overdue” and FSS has completed its administrative search for the aircraft.

SAR OPERATIONS

USFS does not have jurisdictional authority for SAR operations on FS Lands. Missing aircraft search is under the jurisdiction of Montana Aeronautics in Montana and Idaho Bureau of Aeronautics in Idaho. All ground SAR operations are under county sheriff jurisdiction. In North and South Dakota Air SAR is under the jurisdiction of the respective Department of Emergency Services. Until the aircraft is found and identified these agencies are the controlling agencies and all agency SAR operations will be coordinated with them. After the aircraft is positively Identified jurisdiction transfers to the Sheriff of the county the aircraft is located and all ground rescue/recovery operations must be coordinated with their office. This does not prohibit forest service participation if coordinated and approved by the jurisdictional agency.

Idaho Aeronautics Days 208-334-8775
After Hours 800-632-8000 (Idaho State Com. Center)

Montana Aeronautics Days 406-444-2506
After Hours 855-647-3777 (MT Highway Patrol Dispatch)
406-841-7022

North Dakota Department of Emergency Services Days 701-328-8100
After Hours 701-328-9921 (State Radio ask for DES Duty Officer)

South Dakota Department of Emergency Services Days: 605-773-3231
After Hours 605-772-7981 (State Dispatch ask for DES Duty Officer)

Air Force Rescue Coordination Center 800-851-3051

Forest Supplement

Placeholder.

5.11 Mishap Response

Forest Service local units shall establish procedures in an Emergency Response Plan to, [FSM5720.48](#):

- Coordinate and plan the response to aviation accidents and incidents; and should
- Conduct periodic exercises of mishap response plans.

The Emergency Response Plan is specific to each unit and shall be available in all dispatch offices. The Emergency Response Plan must be updated annually at a minimum.

Regional / Program Aviation Safety Manager should be notified immediately of any aviation accident, incident with potential or NTSB reportable incident.

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MISHAP RESPONSE PLAN EXERCISES

It is recommended as a “best management practice” to declare June as ‘Aviation Mishap Response Awareness Month’. Units are encouraged to:

- Review and validate the local unit Aircraft Mishap Response Plan
- Conduct exercises to test the plan information and to practice the procedures
- Conduct After Action Reviews (AARs) to identify gaps in procedures and information
- Record the results of the exercises and AARs and retain for future improvement

AIRCRAFT MISHAP RESPONSE ACTIONS

RESCUE OPERATIONS

- A. Time is an extremely critical factor in responding to an emergency situation. Immediate positive action is necessary; delay may effect someone’s survival.
- B. Preserve life and secure the area.
- C. Do whatever is necessary to extricate injured occupants and to extinguish fires, keeping in mind the necessity of protecting and preserving evidence.
- D. Secure the area and deny access except to authorized officials.
- E. Document and/or photograph the location of any debris which must be disturbed in order to carry out rescues and/or fire suppression activities.

SITE SAFETY PRECAUTIONS

Aircraft wreckage sites can be hazardous for many reasons other than adverse terrain or climatic conditions. Personnel involved in the recovery, examination, and documentation of wreckage may be exposed to physical hazards posed by such things as hazardous cargo,

flammable/toxic fluids, blood borne pathogens, burning resins, fractured carbon fiber, and composite materials, sharp or heavy objects, and disease. It's important to exercise good judgment, utilize available protective devices and clothing, and use extreme caution when working in the wreckage. Do not exceed your physical limitations.

WRECKAGE SECURITY

Treat the area like a crime scene. Arrange for security at the mishap scene. Determine if hazardous materials (HazMat) are on the aircraft and request special assistance if necessary. Wreckage and cargo should not be disturbed or moved except to the extent necessary:

- To remove persons injured or trapped
- To protect the wreckage from further damage
- To protect the public from injury
- To deactivate the emergency locator transmitter (ELT) if installed.

Where it is necessary to move aircraft wreckage, mail or cargo, sketches, descriptive notes, and photographs should be made.

NEWS RELEASES

The National Transportation Safety Board (NTSB) should make contacts with news media regarding the mishap.

EVIDENCE

Perishable evidence, e.g. human factors data and witness information, must be quickly documented.

Forest Supplement

Placeholder.

5.12 Passengers

A passenger is any person aboard an aircraft, when traveling on official Forest Service business, who does not perform the function of a flight crewmember or air crewmember.

Passengers will:

- Use appropriate personal protective equipment for the type of flights being conducted
- Report aviation incidents, operations deviating from policy, potential incidents
- Ensure personal safety as well as safety for others involved in the flight.

5.12.1 Agency Employees off Duty

Federal employees cannot utilize annual leave/Leave without Pay (LWOP) or “volunteer” in order to circumvent agency policy. If any aspect of the employee’s activity is related to their official duties, they are conducting agency business, regardless of their pay or leave status.

Refer to the regulations regarding off-duty activities in accordance with the Standards of Ethical Conduct for Employees of the Executive Branch ([5 CFR Part 2635.802-803](#))

5.12.2 Volunteers

Volunteers when traveling on official business are official passengers, within the terms of [FSH 6509.33, Federal Travel Regulations 301-1](#). A [Day Trip Authorization \(FS-5700-12\)](#) shall be filled out for each flight listing each volunteer. During fire mission flights, the Incident Commander with Delegation of Authority from the unit line officer or the local line officer is the appropriate level of approval ([FSM 5716.44- Exhibit 01](#)).

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

5.13 Transportation of Hazardous Materials

Transportation of hazardous materials aboard agency contracted aircraft must meet the requirements set forth in the [Interagency Aviation Transport of Hazardous Materials USDI Handbook and USDA-FS Guide](#).

Hazardous materials transported aboard commercial aircraft fall under [49 CFR Part 175](#). Employee shall check with commercial carrier prior to traveling. Some commercial carriers may not permit hazardous materials.

When hazardous materials are transported on agency aircraft, the most current special permit authorization issued by the Department of Transportation directly to the USDA Forest Service ([DOT SP-9198](#)) shall be onboard each aircraft. All aircraft operated under this special permit must be under operational control of the Forest Service for the purposes of a government function listed in the special permit.

Regional Supplement

1. Hazardous Materials (HazMat) Transport.

Refer to [FSM 5714.2](#), the Exemption, and the Guide for more specific requirements, but some important provisions are:

- a. The guide applies only to field operations. Hazardous Materials that are not specified in the guide, and those transported by aircraft not under the exclusive direction and control of the FS or DOI, must be transported in compliance with 49 CFR Part 175.
- b. A copy of exemption DOT E-9198, a current Emergency Response Guidebook, and the most current NWCG Standards for Aviation Transport of Hazardous Materials must be carried aboard each aircraft operating under the provisions of the exemption.
- c. Personnel on aircraft carrying HazMat will be limited to those persons essential to mission accomplishment.
- d. HazMat will only be carried on aircraft when other means of transportation are impractical.
- e. The pilot and all personnel aboard an aircraft must be notified of HazMat being transported.
- f. Any mishap involving HazMat shall immediately be reported to the Regional Ground Safety or Regional Engineering representative.
- g. Documented training is required in the proper handling of a HazMat for each person who loads or unloads HazMat on an aircraft.

2. Pressurized irritants, such as Oleoresin Capsicum (OC) or pepper spray, aboard an aircraft present two types of risk to employees:

- a. In the event of an accidental discharge within the confines of an aircraft cabin, it is likely that all occupants would be incapacitated. Missoula Technology and Development Center (MTDC) recommends the use of a vented container with foam liner in its information FS pamphlet "Safety Containers for Transporting Bear Repellent Spray Canisters in Vehicles." WO Amendment 6709.11 Chapter 50 provides information for authorization of employees to carry this type HazMat in field operations.
- b. Such items are treated as weapons by airport security if passengers attempt to board scheduled airlines with them in their possession.

Forest Supplement

Placeholder.

5.14 Invasive Species Control

Aquatic invasive species are easily transported in a variety of ways (e.g., helicopter buckets, fixed tank helicopters and SEATs utilizing open water sources, engines and tenders, and other water handling equipment). Agency personnel should become knowledgeable in the preventive measures associated with the prevention of the spread of aquatic plants and invertebrates. Aviation managers should consult with local unit representatives to acquire information associated with: contaminated water sources, approved water sources, cleaning equipment exposed to contaminated water requirements, and other pertinent information.

In addition, the Equipment Technology Committee under the National Wildfire Coordinating Group established an [Invasive Species Subcommittee](#) to focus on developing guidance for use in the interagency fire community.

Work is underway to develop additional guidance and procedures in the cleaning of equipment that has been exposed to aquatic invasive. Current information concerning cleaning solutions can be found at this web site:

<http://www.fs.fed.us/rm/fire/wfcs/documents/watercon.pdf>

Many web sites exist containing information on invasive aquatic species. The following is not an all-inclusive list but will provide the user with specifics about aquatic invasive species, guidance surrounding the prevention of spreading invasive, as well as equipment cleaning information:

Forest Service Region 4 Fire Operations Guidance for Aquatic Invasive Species:

<http://www.fs.fed.us/r4/resources/aquatic/guidelines/index.shtml>

USDA National Invasive Species Information Center Resource Library:

<http://www.invasivespeciesinfo.gov/resources/orgstate.shtml>

Forest Service Technology & Development Water-Source Toolkit:

<http://www.fs.fed.us/t-d/programs/wsa/watertoolkit.htm>

Environmental Protection Agency Useful Links to Invasive Species Information:

http://www.epa.gov/owow/invasive_species/links.html

Forest Service Invasive Species Program:

<http://www.fs.fed.us/invasivespecies/index.shtml>;

<http://www.fs.fed.us/invasivespecies/relatedlinks.shtml>

Forest Service Region 4 Invasive Species Homepage:

<http://www.fs.fed.us/r4/resources/invasives/>

US Fish and Wildlife Service Western Regional Panel on Aquatic Nuisance Species

Homepage: <https://www.fws.gov/Answest/>

Global Invasive Species Database: <http://www.issg.org/database/welcome/>

California Department of Fish and Game Invasive Species:
<https://www.wildlife.ca.gov/Conservation/Invasives>

USDA National Invasive Species Information Center Homepage:
<http://www.invasivespeciesinfo.gov/>

Aquatic Nuisance Species Task Force Homepage: <http://anstaskforce.gov/default.php>

US Fish and Wildlife Service Invasive Species Homepage:
<http://www.fws.gov/invasives/>

US Geological Survey Non-indigenous Aquatic Species Homepage:
<http://nas.er.usgs.gov/>

Regional Supplement

Reference Guide to Preventing Aquatic Invasive Species Transport by Wildland Fire Operations PMS 444: <https://www.nwcg.gov/sites/default/files/publications/pms444.pdf>
See also appendix 10.19 NRCG 2018 letter on AIS

Forest Supplement

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5.15 Fire Chemicals and Aerial Application Policy for Areas Near Waterways

For operational guidelines on use of fire chemicals, refer to [Implementation Guide for Aerial Application of Fire Retardants](#). For aerial application of pesticides near “waters of the United States”, refer to Environmental Protection Agency’s National Pesticide Discharge Elimination System (NPDES) <http://cfpub.epa.gov/npdes/> and consult your USFS Regional Pesticide Coordinator for NPDES permitting information.

Interagency policy only allows the use of a product that is qualified and approved for intended use. A Qualified Products List (QPL) is published for each wildland fire chemical type and maintained on the Wildland Fire Chemical Systems (WFCS) web site: <http://www.fs.fed.us/rm/fire/wfcs/index.htm>.

Personnel involved in handling, mixing, and applying chemicals or solutions shall be trained in proper safe handling procedures and use the personal protective equipment recommend on the product label and Material Safety Data Sheet (MSDS). The MSDSs for all approved fire chemicals can be found on the WFSC web site. MSDSs for pesticides or other materials

must be available on site for duration of project. One resource for searching MSDSs is <http://www.msds-online.com/msds-search/>.

Airtanker bases shall have appropriate spill containment facilities (and equipment) in place.

Products must be blended or mixed at the proper ratio by approved methods prior to being loaded into the aircraft. Inaccurate mixing of fire chemicals may negate the suppressant or retarding properties, which is not cost effective and may be a safety factor.

Avoid aerial application of wildland fire chemicals within 300 feet of waterways. Report all retardant misapplications using the report tools located on the USFS Retardant Environment Impact Statement (EIS) website: [Aerial Application of Fire Retardant](#). The following link provides assistance with access to retardant misapplication forms and the reporting process:

http://www.fs.fed.us/fire/retardant/forms/wfcmr_getting_started_guide.pdf

5.15.1 Retardant Avoidance Areas

Aerial retardant drops are not allowed in mapped avoidance areas for certain threatened, endangered, proposed, candidate or sensitive (TEPCS) species or in waterways. This national direction is mandatory and would (sic) be implemented except in cases where human life or public safety is threatened and retardant use within avoidance areas could be reasonably expected to alleviate that threat ([Implementation Guide for Aerial Application of Fire Retardant](#)).

View Forest Service Aerial Fire Retardant Avoidance Maps here:
http://ftp.nifc.gov/base_info/retardant_avoidance_areas/Maps/.

Regional Supplement

Refer to the [Implementation Guide for Aerial Application of Fire Retardant- June, 2016](#) for additional information on the directions for retardant application.

https://www.fs.fed.us/fire/retardant/2016AFR_Handbook_508_FINAL06012016.pdf

Forest Supplement

Placeholder.

5.16 Search and Rescue (SAR)

Refer to the [FSM 5713.53](#) and [FSM 1590](#) regarding search and rescue. Search and rescue operations could lead to actions in conflict with policy. Refer to section 5.5 in this Plan for Aviation Emergency Response.

Regional Supplement

SEARCH AND RESCUE

Lost or Injured Persons - The County Sheriff is responsible for search and rescue of overdue or missing persons. Pursuant to 16 USC 575, The Secretary of Agriculture is authorized to incur such expenses as may be necessary in searching for persons lost within the National Forests or to provide transportation to persons seriously ill, injured or who die within the National Forests to the nearest place where the sick or injured person(s) may be transferred to interested parties or local authorities.

Forest Service owned, contracted, or leased aircraft shall not be used in SAR operations unless authorized by a line officer and ordered by the Forest Aviation Officer (FAO) and/or Forest Dispatch. The only exception would be if a pilot and aircraft were released from contract obligation and the requesting agency assumes responsibility (Note: Refer to specific contract).

The CO or COR may decline any requests for release of an aircraft from contract if the flight is not in the interest of the FS. The contractor or contractor's representative may also decline any requests for release.

When Search and Rescue or body retrieval is performed by the Forest Service utilizing exclusive use or vendor contracted aircraft on Forest Service administered land, expenditure of government funds and resources can be committed only at discretion of the line officer.

When these activities occur outside National Forest administered lands, a use agreement or MOU (with a reimbursement instrument) with the ordering agency, i.e. local county, sheriff, city or town coroner, city police) should be in place before expenditure of government funds and resources can be committed.

OPERATIONAL PROCEDURES

A. Personnel. All SAR helicopter operations involving FS personnel shall be managed by a qualified Helicopter Manager (IHOG Chapter 2). The only exception is when the agency is utilizing other government agency or military aircraft, and the provider of the aircraft is also providing the helicopter and/or helibase management services, such as, flight following, loading/unloading of personnel/cargo, external load operations, etc. and operation is approved by the RAO. Only essential personnel will be allowed aboard SAR aircraft (media, political officials, and family members are not considered essential to the mission).

B. Flight Following. Forest Service flight following of SAR aviation operations will take place either through the appropriate dispatch/coordination center or incident command. Flight following shall be accomplished as per FS regulations. If the dispatch/coordination center is not used for flight following then the dispatch/coordination will be notified of the mission, area of mission, frequencies, date and time frame of the mission.

C. Personal Protective Equipment. PPE will be worn as required by this plan. Exemptions are listed in Chapter 16 of the IHOG. Personal Floatation Devices (PFDs) are required to be worn by all occupants when conducting overwater SAR operations.

D. Aircraft /Pilot Qualifications. FS, contractor, and cooperator aircraft used to fly FS personnel must be flown by pilots who meet agency standards and possess a current Interagency Pilot Qualification Card. Use of other aircraft requires acceptance of that agency's pilot qualifications if operating under a current MOU. Aircraft and pilots not meeting these guidelines must be approved by the RAO.

E. Use of Military Helicopters. National Guard helicopters used to fly Forest Service personnel involved in the SAR operation must have a letter of approval on board each helicopter stating that they are approved for FS use. All FS rules and procedures apply when FS employees are involved (PPE, flight following, etc.). U.S. military helicopters may be used, but only with prior approval from the RAO and only on a case-by-case basis, if FS personnel are on board the aircraft.

F. Wilderness Areas. In the interest of public safety, Forest Supervisors or Regional Forester may approve use of motorized equipment or mechanical transport for emergencies where the situation involves an inescapable urgency and temporary need for speed beyond that available by primitive means. Categories include fire suppression, health and safety, law enforcement involving serious crime or fugitive pursuit, removal of deceased persons, and aircraft accident investigations. (FSM 2326.1) Advanced approval for initial missions in wilderness is only applicable to life-threatening emergencies in which time is critical. Subsequent flights will require a separate Forest Supervisor or Regional Forester approval.

G. Landing Areas (Helicopter). Use of helispots must be in accordance with IHOG requirements.

H. Altitude. A minimum operational flight altitude of 500 feet above the terrain will be maintained for fixed wing aircraft except for takeoffs and landings.

I. Night. Search and rescue operations are only authorized between 30-minutes before official sunrise to 30-minutes after official sunset.

J. Flight Minimums. Helicopter and fixed-wing aircraft should maintain appropriate VFR flight minimums. Basic weather minimums are found in 14 CFR 91.155.

K. Load Calculations and Manifests. When utilizing aircraft other than military, load calculations and manifests are required. When utilizing a military aircraft, use of the Performance Planning Card (PPC) is acceptable along with a manifest. Load calculations will be made prior to flight. It is the responsibility of the pilot, however FS personnel must ensure this is done. A copy of the manifest and load calculation is kept on the ground until the flight is terminated. Passenger changes need to be documented.

L. Briefing Requirements. In addition to a thorough briefing of the SAR operation, a standard aviation operation briefing will be conducted.

Forest Supplement

5.17 Large Airtanker Operations

Large Airtankers are a national resource and their primary mission is initial attack. Geographic Areas will make them available for wildland fire assignments when ordered by the National Interagency Coordination Center. In addition to federally contracted airtankers, MAFFS (military) and cooperator aircraft may be utilized to supplement the federal fleet through established agreements.

Operational considerations concerning all Airtankers can be referenced in the [Interagency Airtanker Base Operations Guide \(IATBOG\)](#) and the [Interagency Aerial Supervision Guide \(IASG\)](#).

5.17.1 Very Large Airtanker (VLAT) Operations

VLATs require a VLAT qualified lead plane or aerial supervision module for all missions. Not all airtanker bases are capable of supporting VLAT operations due to runway or ramp limitations.

Airtanker bases must evaluate base size, configuration, retardant capacity and other relevant factors before inserting VLATs into the existing pit areas. Consider establishing a satellite base at the airport or an airport in the proximity.

5.17.2 Airtanker Bases

Airtanker bases will be staffed, and procedures and operations will be executed, in accordance with the [Interagency Airtanker Base Operations Guide \(IATBOG\)](#).

Regional Supplement

VERY LARGE AIRTANKER (VLAT) OPERATIONS

Region 1 has no dedicated VLAT bases. VLAT orders will be filled from bases outside the region.

LARGE AIRTANKER (LAT) OPERATIONS

A. Unless local forests establish more restrictive operational requirements, airtankers in Regions 1 may drop retardant/suppressants from 30-minutes before official sunrise to 30-minutes after official sunset. (FSM 5709.16.35.32)

B. Airtankers and ASM/Leadplanes in Regions 1 are normally not assigned to a specific incident, but rather, may be dispatched to any incident as priority dictates.

C. Initial attack and suppressing wildfires in urban-interface areas are regional priorities.

D. Airtankers and ASM/Leadplanes will use the flight-following frequency assigned by local dispatch centers and will use the same check-in procedures established in the National Mobilization Guide.

E. An Aerial Supervision Module (ASM)/Leadplane will be requested for airtanker operations.

F. An Air Tactical Group Supervisor is required for complex aviation operations (FSM 5716.32).

G. Retardant/suppressant drops in congested areas can be supervised by an Air Tactical Group Supervisor if a leadplane is on order (FSM 5714.11, Exhibit 01, Grant of Exemption 392). Also see the Interagency Aerial Supervision Guide.

Airtanker Base Reporting Requirements

Airtanker Base Reporting Requirements for Sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA)

Because airtanker bases store large quantities of fire retardants (greater than 10,000 pounds), they are subject to reporting to state and local emergency planning agencies as part of the Emergency Planning and Community Right-to-Know Act (EPCRA). This reporting complies with Sections 311 and 312 of EPCRA and is different from the Toxic Release Inventory (Section 313) that the Forest Service Wildland Fire Chemicals program (WFCS) currently reports on as needed for airtanker bases. The reporting protocol, known as Tier II Chemical Reporting, requires the following from each tanker base:

- Distribution of retardant Material Safety Data Sheets (MSDS) to local fire departments, State Emergency Response Commissions (SERC) and Local Emergency Planning Committees (LEPC).
- Yearly reporting, in the form of a brief one-page questionnaire. March 1 is the deadline for reporting for the previous year.

Each state has its own reporting form, links to which can be found on the Environmental Protection Agency (EPA) EPCRA website:

<http://www.epa.gov/emergencies/content/epcra/tier2.htm>. The individual state links also include information on where to send the completed forms.

Directions for retardant reporting are covered in letter <https://ems-team.usda.gov/sites/fs-wo-cdba12/cdbfy2012q2/Lists/fy2012q2/DispForm.aspx?ID=1545>

Forest Supplement

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5.18 SEAT Operations

SEATs primary mission is initial attack. Mobilization is managed by Dispatch Centers with support by the Bureau of Land Management's National SEAT Coordinator and BLM State Aviation Managers. Operational considerations concerning SEATs can be referenced in the [Interagency SEAT Operations Guide \(ISOG\)](#) and the [Interagency Aerial Supervision Guide \(IASG\)](#).

SEAT Manager (SEMG) responsibilities are outlined in the [Interagency SEAT Operations Guide \(ISOG\)](#), and their training and currency requirements are contained in the [NIMS Wildland Fire Qualification System Guide \(NWCG PMS 310-1\)](#).

Regional Supplement

[IDL master agreement-chpt40-SEAT-and-AWS:](#)

Forest Supplement

Placeholder.

5.19 Aerial Supervision Operations

Lead planes (LP) and Aerial Supervision Modules (ASM) are national resources as defined by the National Interagency Mobilization Guide.

Air Tactical Group Supervisor (ATGS) aircraft, LPs, ASMs and Helicopter Coordinators (HLCO) conduct operations in accordance with the [Interagency Aerial Supervision Guide \(IASG\)](#) and the policies and procedures prescribed in the [Interagency Standards for Fire and Fire Aviation Operations Handbook](#). Dispatch and ordering are accomplished in accordance with the Geographic Area and National Mobilization Guides.

Personnel shall be fully qualified as an ATGS to perform air tactical supervision.

Lead planes and ASM will be considered interchangeable in terms of the lead plane mission. An ATGS should be ordered if there is a need for incident air tactical supervision.

Lead plane pilot trainees will be given priority over all ASM flights/ missions.

The Aerial Supervision Program is managed by the WO Aerial Supervision Program Manager.

Regional Supplement

Placeholder.

Forest Supplement

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5.19.1 Aerial Supervision Personnel

The ATGS manages incident airspace and controls incident air traffic. The ATGS is an airborne firefighter who coordinates, assigns, and evaluates the use of aerial resources in support of incident objectives. The ATGS is the link between ground personnel and incident aircraft.

Air tactical aircraft can be considered a local unit, incident, or geographic resource. Air tactical aircraft must meet the avionics typing requirements listed in the [Interagency Aerial Supervision Guide \(IASG\)](#) and the pilot must be carded to perform the air tactical mission.

Air Tactical Group Supervisors (ATGS) responsibilities and procedures are outlined in the [Interagency Aerial Supervision Guide \(IASG\)](#), and the position qualifications, training and currency requirements are contained in the Forest Service Fire and Aviation Qualifications Guide.

The ATGS works for the Air Operations Branch Director (AOBD) when an AOBD is assigned. If an AOBD is not assigned, the ATGS works for the incident commander or designee.

5.19.2 ASM

An ASM is a two person crew consisting of a lead plane pilot and ATGS-ATS (Air Tactical Supervisor). The ASM crew is qualified in their respective positions and has received additional training. An ASM can be utilized as a LP or ATGS depending on the needs of incident management personnel.

ASM responsibilities and procedures are outlined in the [Interagency Aerial Supervision Guide \(IASG\)](#). LP pilot responsibilities and procedures are outlined in Forest Service policy ([FSM 5714.11 – Exhibit 01](#), [FSH 5709.16 Chapter 20](#)) and the IASG.

Lead plane pilot designations are the responsibility of the WO Branch Chief, Pilot Standardization.

ATGS-ATS designations are the responsibility of the WO Aerial Supervision Program Manager.

ASMs work for the ATGS when an ATGS is assigned. If an ATGS is not assigned, the ASM works for the incident commander or designee.

5.19.3 Lead Plane

Lead planes coordinate, direct, and evaluate airtanker and other incident aircraft operations. The low level capabilities of a lead plane enhance the safety and effectiveness of airtanker operations in the low level turbulent, smoky, and congested fire environment. Lead planes are single pilot aircraft unless a lead plane trainee is assigned.

LP responsibilities and procedures are outlined in Forest Service policy ([FSM 5714.11 – Exhibit 01](#), [FSH 5709.16 Chapter 20](#)) and the [Interagency Aerial Supervision Guide \(IASG\)](#).

Lead plane pilot designations are the responsibility of the WO Branch Chief, Pilot Standardization.

Lead planes work for the ATGS when an ATGS is assigned. If an ATGS is not assigned, the LP works for the incident commander or designee.

5.19.4 HLCO

The HLCO coordinates, directs, and evaluates tactical/logistical helicopter operations. The HLCO works for the ATGS. This position is typically activated on complex incidents where several helicopters are assigned. A HLCO can reduce the span of control of the ATGS by managing all the helicopters over an incident.

HLCO responsibilities and procedures are outlined in the [Interagency Aerial Supervision Guide \(IASG\)](#). The position qualifications, training and currency requirements for the HLCO are contained in the [Forest Service Fire and Aviation Qualifications Guide](#).

HLCOs work for the ATGS when an ATGS is assigned. If an ATGS is not assigned, the HLCO works for the incident commander or designee.

5.20 Helicopter Operations

All helicopter operations shall be accomplished in accordance with the [Interagency Helicopter Operations Guide \(IHOG\)](#), the Aerial Ignition Guide, and the aircraft contract.

The applicable Hover out of Ground Effect (HOGE) chart will be used for initial attack operations, first time into remote landing site, or when the pilot deems that environmental conditions warrant use of HOGE chart.

5.20.1 Helitack

Each unit hosting an exclusive-use helicopter is responsible for providing essential management, overhead, equipment, facilities and the resources necessary to fully support the helitack crew. Minimum crew staffing is contained in the [Interagency Standards for Fire and Fire Aviation Operations](#). Helicopter personnel responsibilities are outlined in the [Interagency Helicopter Operations Guide \(IHOG\)](#), and their training and currency requirements are contained in the [Forest Service Fire and Aviation Qualifications Guide](#).

Regional Supplement:

HELICOPTER OPERATIONS

A. **Bucket Operations:** Bucket operations will be in accordance with the bucket manufacturer's operating guide. In order to prevent buckets from contacting the tail rotor, buckets will be hooked directly to the belly hook or be attached to a line no shorter than 50'.

B. **Dipsite Operations:** As soon as practical in IA and all extended attack continuous communications capability between the helicopter and the flight following station or another aircraft is required while operating at the dip site. When practical, a ground observer able to communicate with the helicopter at the dip site may be utilized for this purpose.

C. Doors Off/Doors Open (DO/DO) operations w/ secondary restraints:

Requirements for secondary restraints apply to all missions during DO/DO operations when moving about the cabin or operations requiring extremities outside the aircraft to fulfill the mission. These missions are aerial ignition, rappel, short-haul, and other missions as identified in the specific risk assessment. Consult the HOS for any question on this requirement.

Addition of the following language/provisions from FSSA 18-03 to applicable PASPs and operational plans are considered “best management practices” until such time as applicable policies, operational plans, and guides are updated to incorporate the latest changes:

At a minimum, include the following actions/considerations for door(s)-off door(s)-open in planning documents and during operational briefings:

- *Aircraft connection point and secondary restraint configuration (Interagency Safety Alert IASA 17-02)*
- *Proper donning and adjustment of secondary restraint system*
- *Understanding of the secondary restraint interaction with FAA approved seatbelt*
- *Location and use-of the secondary restraint quick-release mechanism(s)*
- *Utilize the buddy-check process to confirm proper configuration and connection (double-check/re-inspection)*
- *Egress Training (secondary restraint quick-release mechanism, removal of seatbelt, existing aircraft)*
- *Location and use of rescue knife (seatbelt/webbing cutter)*
- *Any time a secondary restraint is utilized it must remain free of all flight controls and switches*

D. External Loads (Long-line/Remote Hook). Only pilots approved for external load work will perform external loads. Qualified personnel will conduct long-line/remote hookups.

E. Free-Fall Delivery. For helicopter free-fall delivery refer to Chapter 11 of the Interagency Helicopter Operations Guide (IHOG).

F. Initial Attack and Fire Support Transport. A helicopter manager will supervise initial flight to a fire when the passengers are other than trained helitack. During fire support, personnel qualified in helicopter use will supervise the operation at each helicopter-landing site. Recommend completion of Green/Amber/Red (GAR) or mission specific Flight Risk Assessment Tool (FRAT) prior to initial attack.

G. Module ‘Marry-up’. Helicopters deployed for project or suppression activity will be staffed with qualified personnel. Call-when-Needed (CWN) modules must be given time to conduct pre-use inspections, power checks, and verify pilot and aircraft qualifications cards prior to use. It is important that this be done at a location other than the incident helibase. (Interagency Helicopter Operations Guide and National Interagency Mobilization Guide)

H. Personal Protective Equipment (PPE) Requirements.

1. As a minimum, individuals shall wear the PPE required for a helicopter occupant as specified in the IHOG, Chapter 9. Any deviation from this requirement must be approved in accordance with the PASP reviewed by the RAO.
2. In lieu of a flight suit, firefighters approved fire resistant pants and shirt can be worn.
3. In accordance with Chapter 9 of the IHOG, rubber/synthetic boots may be worn if the environmental situation warrants; otherwise leather boots are required. Personal Protective Equipment (PPE) will be worn as required by this plan. Exceptions for the above require specific agency waiver to policy for extreme environmental conditions, i.e. wet, boggy, extreme cold conditions (see appendix 10.16).

I. Projects. A qualified helicopter manager will supervise project helicopter operations. The Forest Helicopter Program Manager must be consulted early in the project planning stage. If there is no local Helicopter Program Manager or acting, contact the FAO or Regional HOS.

J. Rappel/Cargo Letdown. Helicopter missions involving rappel/cargo letdown operations shall be conducted in accordance with the National Rappel Operations Guide (NROG). The HOS will be responsible for reviewing operating plans for those units conducting helicopter rappel and cargo letdown operations. Line officer approves.

K. Short-Haul: Short Haul missions shall be conducted following The Emergency Medical Short-Haul Operations Plan (EMSHOP). See 5.20.4. The region coordinates the location of Short-haul assets based on response circles, activity levels, unit requests, and other factors.

L. Ski Areas...Heli-ski Permit Operations. Flight Operations Policy and requirements for Personal Protective Equipment is clarified in FSM 5716.03, IHOG, and the Regional Heli-skiing Permit Administration Aviation Operations Plan.

HELI-SKIING OPERATIONS ON NATIONAL FOREST LANDS

To facilitate operational guidelines for Heli-Skiing Operations on National Forest Lands within the Region, the following procedures shall be in place. A copy of the following documents shall be maintained at the Forest and Regional Office.

1. All aircraft and pilots, to be utilized by an operator, conducting heli-skiing operations shall be certified in accordance with CFR Title 14, Federal Aviation Regulations Part 135, and be in full compliance with these regulations to transport passengers for compensation or hire.

2. A copy of the operators Part 135 certificate, along with the operations specifications from the “A” section listing the aircraft Authorization and the “D” section listing the aircraft maintenance requirements. This information shall be provided to the Regional Aviation Staff prior to commencing heli-ski operations.
3. A copy of the Federal Aviation Administration Form 8410-3, or equivalent, for each pilot’s competency must be provided to the Regional Aviation Staff, prior to issue of a Forest Service permit to operate on National Forest Lands.
4. A current copy of the Special Use Permit from the Forest for Heli-skiing operations on National Forest Land shall be provided to Regional Aviation Staff.
5. An approved current copy of the Regional Heli-skiing Permit Administration Aviation Operations Plan shall be available prior to heli-ski operations.
6. Letter of Approval (FSM 5713.51) Planned Administrative Flights. In unusual circumstances when approved aircraft are not available, or their use is not practical, Forest Service personnel may perform their official duties in aircraft lacking prior approval. Regional Foresters may approve these flights provided they approve each flight or series of flights by letter containing a list of authorized employees, appropriate restrictions, and expiration date.

Typically, helicopters which are being utilized for heli-skiing on National Forest Lands are not under contract to the US Forest Service, therefore they are considered Non-Forest Service Approved Aircraft (FSM 5713.5). These aircraft are only authorized to perform heli-skiing operations in conjunction with an approved heli-ski guide service under a Special Use Permit issued by the Forest. Any other aviation activity such as; wildlife surveys, area reconnaissance, avalanche control while transporting Forest Service personnel, must utilize either an Exclusive Use or Call-When-Needed helicopter contract.

M. Special Use Permits...Private/ Commercial use of helicopters on FS Lands: Private or commercial use of helicopters on FS lands requires consultation of Lands, Special Use, and Line Officers.

5.20.2 Rappel

Rappel activities will be conducted in compliance with the [Interagency Helicopter Rappel Guide](#) and [National Rappel Operations Guide](#).

5.20.3 Cargo Letdown

Cargo letdown will be conducted in compliance with the [Interagency Helicopter Rappel Guide](#) and [National Rappel Operations Guide](#).

5.20.4 Emergency Medical Short-Haul

Emergency Medical Short-Haul operations support the rapid evacuation of injured personnel. All Emergency Medical Short-Haul operations will be conducted in accordance with the [Emergency Medical Short-Haul Operations Plan \(EMSHOP\)](#).

5.20.5 LEI Short-Haul and Hoist

Short-Haul and Hoist operations are approved for Region 5 Law Enforcement and Investigations at this time. Short-Haul and Hoist operations will be conducted in compliance with the [Interagency Helicopter Operations Guide \(IHOG\)](#) and the Forest Service (FS) National Law Enforcement and Investigations (LEI) Short-Haul and Hoist (S-H/H) Guide.

5.20.6 Helicopter Bucket and Tank Operations

Helicopter Bucket and Tank Operations will be conducted in compliance with the [Interagency Helicopter Operations Guide \(IHOG\)](#).

5.20.7 Helicopter External Load Operations

Helicopter External Load Operations will be conducted in compliance with the [Interagency Helicopter Operations Guide \(IHOG\)](#).

5.20.8 Night Helicopter Operations

Forest Service Night Helicopter Operations are only authorized in Region 5. Night helicopter operations are restricted to fixed tank, ground fill only. Night helicopter operations will be conducted in compliance with the Night Air Operations Plan.

5.20.9 Interagency Helicopter Screening and Evaluation Subcommittee

The Interagency Helicopter Screening and Evaluation Subcommittee (IHSAES) will provide guidance for standardization when evaluating new interagency helicopters and related accessories.

5.21 Aerial Ignition Operations

Aerial ignition operations and projects are accomplished in accordance with the [Interagency Aerial Ignition Guide](#).

Regional Supplement

AERIAL IGNITION

Aerial ignition operations in the Northern Region requires an aircraft that meets high performance Type III standards.

Definition of a high-performance type 3 helicopter: capable of an internal payload of 800 pounds at 5000 feet PA and 30°C with 1 hr and 30 minutes of fuel and with a 200-pound pilot.

PLASTIC SPHERE DISPENSOR (PSD) OPERATIONS
(see 5.20 Helicopter Operations...Regional supplement...DO/DO w/supplemental restraint)

Forest Supplement

Placeholder.

5.22 Wild Horse & Burro Operations

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Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

5.23 Aerial Capture, Eradication and Tagging of Animals (ACETA)

RESERVED

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

5.24 Water Scooper Operations

Water scoopers are a national resource and should be managed and used much like heavy helicopters. Operations will be in compliance with the Water Scooper Evaluation and Operations Plan

Regional Supplement

See R-1 Water Scooper plan (under development).

5.25 Smokejumper Operations

Smokejumper dispatch and ordering are accomplished in accordance with the Geographic and National Mobilization Guides and [Interagency Smokejumper Operations Guide \(ISMOG\)](#).

5.25.1 Smokejumper Personnel

Smokejumper: Smokejumper operations are performed according to the [Interagency Smokejumper Operations Guide \(ISMOG\)](#), and the policies and procedures prescribed in the [Interagency Standards for Fire and Aviation Operations Handbook](#).

Smokejumper Pilots: The [Interagency Smokejumper Pilot Operations Guide \(ISPOG\)](#) serves as policy for smokejumper pilots' qualifications, training and operations.

Smokejumper Parachute System: Forest Service parachute operations are currently transitioning to a ram-air parachute system. Forest Service ram-air parachute operations will be performed in accordance with the [Ram Air Parachute System Change Management and Implementation Plan \(CMIP\)](#).

5.25.2 Smokejumper Aircraft

Smokejumper aircraft are evaluated and approved by the Smokejumper Aircraft Screening and Evaluation Subcommittee (SASES). The SASES will provide guidance for standardization when evaluating new smokejumper aircraft and related accessories.

Regional Supplement

A. Refer to the [Geographic Area Mobilization Guide](#) for smokejumper or paracargo requests.

B. Smokejumper aircraft availability should be consistent with staffing at smokejumper bases and at a level that meets initial attack dispatches.

Forest Supplement

Placeholder.

5.26 Light Fixed-Wing Operations

Fixed-wing dispatch, ordering, and operations are accomplished in accordance with the local geographic area and National Mobilization guides.

For all non-fire flights, the [Interagency Aviation Training Guide](#) provides the training standards for fixed-wing flight managers (FWFM) in charge of point-to-point and FWFM Special-Use mission flights. A qualified FWFM shall be assigned to point-to-point flights and FWFM Special-Use for mission flights.

Low-level Flight Operations (Less than 500 feet AGL)

The only fixed-wing aircraft missions authorized are:

- Para-cargo.
- Aerial Supervision Module (ASM) and lead profile operations.
- Aerial retardant, water and foam application.

- Aerial Seeding/Spraying

Operational Procedures:

- A high-level recon will be made prior to low-level flight operations.
- All flights below 500 feet will be contained to the area of operation.
- PPE is required for all fixed-wing, low-level flights. Helmets are not required for multi-engine airtanker crews, smokejumper pilots and ASM flight/aircrew members.

5.26.1 Reconnaissance or Patrol Flights

The purpose of aerial reconnaissance or detection flights is to gather and relay information. In addition to detecting, mapping, and sizing up fires, this resource may be utilized to provide ground resources with intelligence, and provide recommendations to the appropriate individuals.

Only qualified Aerial Supervisors (ATGS, ASM, HLCO, and Lead) are authorized to coordinate incident airspace operations. Flights with a "Recon, Detection, or Patrol" designation should communicate with tactical aircraft only to announce location, altitude, and to relay their departure direction and altitude from the incident.

Regional Supplement

A. Free-Fall Delivery (Airplanes)

Airplanes are restricted to dropping of items specifically designed for free-fall, such as standard FS message droppers; when it is necessary to establish contact with ground personnel in the absence of adequate communication by other means. Use of free-fall items, such as message droppers from detection aircraft, shall be done by personnel who have received training in the procedures and with aircraft at least 500 feet above ground level (AGL). All other free-fall or paracargo dropping from airplanes will be done by a qualified smokejumper spotter and with aircraft approved for cargo dropping.

B. Safety

1. Aircraft Mishap Response Plan. This plan will be updated annually for posting in each dispatch center. The Forest/Unit Aviation Officer is responsible to assure local supplementation of the plan.
2. Passenger Briefings. It is the pilot's responsibility to ensure that a passenger safety briefing is provided. If not given, the FWFM shall request this briefing before each flight.
3. Shoulder Harness/Safety Belts. All front seat occupants shall wear shoulder harness and seat safety belts. All occupants shall wear safety belts for takeoffs and landings, and as directed by the PIC.

4. Personal Protective Equipment (PPE). For all fixed wing flights in the Northern Region, the minimum PPE shall consist of Nomex (Aramid) or natural fiber materials (non-synthetic), shoes that fully cover the feet, and long pants that overlap the shoes when in the seated position. Long sleeve shirts are recommended. Individual Forests may be more restrictive for their own forest personnel. For PPE requirements on mission flights refer to “Red Book”.

5. Smoking. Smoking is prohibited aboard and within 50 feet of an aircraft or flammable/chemical storage area (FSH 5709.16).

6. Cell Phones. Cell phone use is prohibited within 10 feet of an aircraft being fueled.

C. Backcountry Mountain/Remote Airstrips

FS classified backcountry airstrip operations have unique requirements for both pilot and aircraft. For purposes of pilot and aircraft qualifications/certifications, the Northern Region considers flights into backcountry airstrips as special mission flights.

Special Mission flight definition: Aviation resource mission in direct support of incidents, such as leadplane and aerial supervision module flights, smokejumper/paracargo flights, reconnaissance, infrared, aerial photo/survey, backcountry mountain/remote airstrips, fire reconnaissance, and other missions requiring special training and/or equipment. (FSM 5710.5) Prior to being dispatched to a backcountry airstrip, a pilot must have a Backcountry (Category IV) Airstrip and Mountainous Terrain endorsements on their Pilot Qualification Card and meet currency requirements for backcountry airstrips.

1. An initial Backcountry Mountain/Remote Airstrip endorsement for prospective pilots will require a satisfactory landing and takeoff at two backcountry airstrips during the evaluation ride.

2. To maintain a Backcountry Mountain/Remote Airstrip endorsement, pilots must make a minimum of five (5) landings and takeoffs from backcountry airstrips during the previous year. Of the five (5) landings and takeoffs, at least one landing and takeoff must occur at a second backcountry airstrip. To maintain specific airstrip currency, a pilot must conduct an operation (landing or takeoff) into the individual airstrip within the preceding 24 months.

3. Forests will develop and maintain an Airstrip Management Plan for each Forest owned and operated airstrip within their responsibility. (See appendix 10.20: Region 1 Backcountry Airstrip Supplement)

4. Forest owned and operated airstrips will be maintained in accordance with current policy.

5. Pilot and FWFM/crew will conduct a Rapid Risk assessment (RRA) prior to landing at any back country airstrip. Elements of the RRA may include, but are not limited to: weather conditions (including density altitude), pilot currency (see #2 above), aircraft performance, communications, and airstrip complexity (terrain, one way in/out).

D. Fixed-Wing Flight Manager (FWFM)

For other than scheduled airline service flights, a qualified and current FWFM will be designated for all airplane passenger flights. The FWFM must be an agency employee. The unit scheduling the flight will provide this designation. When a flight manager, such as a mission coordinator or helicopter manager, is already assigned, a FWFM will not need to be designated.

1. Individuals designated as FWFM shall have received training in performing FWFM duties. A FS pilot may be designated as FWFM. Training requirements are found in the IAT Aviation Use and Management Qualifications Guide at <http://www.iat.gov>.
2. FWFM duties and responsibilities are found in FSH 5709.16 chpt 31.22 and Chapter 20 of the National Interagency Mobilization Guide.
3. FWFM's do not need FWFM special use to perform flights into backcountry strips if they have prior approval of the FAO to perform FWFM duties for Backcountry Mountain/ Remote Airstrips.
4. Other than Administrative Flights: Forest/Unit Aviation Officers will determine level of training needed for Fixed Wing Flight Managers for other than "administrative use flights" on their unit by their own personnel.

5.27 Law Enforcement and Investigations (LEI) Operations

The LEI personnel shall follow the [FSH 5309.11, Chapter 50](#), [FSM 5700](#), and [FSH 5709.16](#) for all aviation operations.

Local LEI personnel that are required to utilize aircraft to support aviation operations should discuss all aspects of the operation with the FAO or UAO well in advance of operations.

All transport of hazardous materials during LEI operations shall follow the [Interagency Aviation Transport of Hazardous Materials Guide](#).

5.27.1 Special Law Enforcement Aviation Projects

Occasionally there are "special" law enforcement aviation missions that are not covered in a standard PASP. If any proposed flights are not covered by an appropriately established

aviation plan, then a PASP will be prepared. This includes the use of aviation resources for Flight Service Contracts. The responsible individual will prepare a PASP and submit the plan for review and approval. All LEI operations will have a PASP prior to commencing operations. Line officers shall be informed of law enforcement and investigator non-covert aviation activities within their area of responsibility.

5.27.2 LEI Training

LEI personnel involved with aviation activities shall receive and be current in required aviation training (NWCG and/or IAT) commensurate with the aviation position they will fill, prior to any aviation operations.

5.27.3 Civil Air Patrol (CAP)

A new Memorandum of Agreement (MOA) is being developed between the USFS and CAP. It will restrict use of CAP to LEI only and limit the make and model of aircraft that can be used. Regions will approve CAP pilots and aircraft based on the MOA. LEI personnel will utilize aircraft and pilots that have been approved for use by a letter of approval from the Regional Aviation officer.

Not all CAP pilots and/or aircraft will be approved for use. Aircraft contracted for fire/resource operations are not mandated to participate in LEI operations. Aircraft companies must agree to participate in LEI operations. Missions outside of the scope of the contract require a contract modification.

Certain LEI operations could lead to actions in conflict with Forest Service policy; reference Section 5.5 Aviation Emergency Response.

5.27.4 Department of Homeland Security (DHS)

The Chief has issued a letter of Authorization for Law Enforcement and Investigations Employees to Fly on Department of Justice (DOJ) and Department of Homeland Security (DHS) Aircraft ([Appendix 10.3](#)) while performing joint law enforcement operations and missions coordinated with DHS agencies.

5.27.5 LEI Personal Protective Equipment (PPE) During Tactical Operations

Follow the direction on the use of personal protective equipment (PPE) described in the [Interagency Helicopter Operations Guide \(IHOG\)](#). Approved PPE must be prescribed by the incident commander, operations supervisor, or their designee per [FSM 5300](#). Law enforcement personnel are authorized to wear the following for special tactical operations, **for emergency flights, or on flights that are short in duration:**

- Battlefield dress uniform (BDU),
- Forest Service uniform, or
- Approved utility uniform.

5.27.6 Emergency Operations

The LEI personnel shall follow the [FSH 5309.11, Chapter 52.15 – Emergency Operations](#)

Regional Supplement

LAW ENFORCEMENT

GENERAL

A. The Patrol Captain (PC), Regional Patrol Commander (RPC) or Assistant Special Agent in Charge (ASAC) is responsible for coordinating with the RAO on any requests for use of aircraft in law enforcement activity.

B. Confidentiality is often a consideration in mission planning. It is essential that law enforcement and aviation managers coordinate mission requirements. With advance planning, missions can be accomplished effectively within FS aviation safety policies.

C. Forest Service owned, contracted, or leased aircraft shall not be used in law enforcement missions without specific prior approval of the Special Agent In-Charge (SAC) and documented concurrence of the vendor and the contracting officer as appropriate. Requests for use of FS operated aircraft by other law enforcement agencies shall be referred to the SAC. The only exception would be if a pilot and aircraft were released from contract obligation and the requesting agency assumes responsibility (Note: Refer to specific contract).

D. The CO or COR may decline any requests for release of an aircraft from contract if the flight is not in the interest of the FS. The contractor or contractor's representative may also decline any requests for release.

PROCEDURES

A. Dispatch Notification. It is the responsibility of the PC, RPC, or ASAC to notify the Center Manager or assistant of any FS law enforcement aviation missions on the Forest with planned dates and times.

B. Personnel. All law enforcement aviation operations shall be conducted by either a qualified Project Helicopter Manager or by a Project Flight Manager, depending on the mission complexity (IHOG Chapter 2). The only exception is when the agency is utilizing other government agency or military aircraft, and the provider of the aircraft is also providing the helicopter and/or helibase management services, such as, flight following, loading/unloading of personnel/cargo, external load operations, etc. and operation is approved by the RAO. The Special Agent in Charge (SAC), Assistant Special Agent in Charge (ASAC), Regional Patrol Commander and all Special Agents will be qualified as or working toward qualification as Fixed Wing Flight Manager (FWFM).

C. Aircraft. Law enforcement aviation missions may be accomplished utilizing agency-owned, contracted, rented or other-government agency or military aircraft (IHOG Chapter 5-3, 16-3). See WO Letter Dated May 20, 2008 Flight Authorization on Department of Homeland Security Aircraft in the appendix.

D. Flight Following. Forest Service flight following of law enforcement operations will take place either through the appropriate center or by using FS law enforcement personnel that are in the field. Flight following shall be accomplished as per FS regulations. If the GACC is not used for flight following then the GACC will be notified of the mission, area of mission, frequencies, date and time frame of the mission. During covert operations where the need for secure communications is essential, one of the following procedures shall be utilized:

1. Grid map reference check-ins
2. Flight following through another agency
3. Automated Flight Following (AFF)

E. Personal Protective Equipment. PPE will be worn as required by this plan. Exemptions are listed in Chapter 16 of the IHOG. Personal Floatation Devices (PFDs) are required to be worn by all occupants when conducting overwater operations.

F. Survival Equipment. There must be sufficient survival equipment suitable for the environment onboard the aircraft to sustain life of all occupants for a minimum of 24-hours.

G. Aircraft /Pilot Qualifications. FS, contractor, and cooperater aircraft used to fly FS law enforcement personnel will be flown by pilots who meet agency standards and possess a current Interagency Pilot Qualification Card. Use of other law enforcement agency, Department of Defense, National Guard, or Coast Guard aircraft requires acceptance of that agency's pilot qualifications if operating under a current MOU. Aircraft and pilots not meeting these guidelines must be approved by the RAO (FSM 5712.41, 5713.4).

H. Use of Military Helicopters. National Guard helicopters and pilots must be approved for FS use. They will have a letter of approval on board each helicopter stating that they are approved for FS use. All FS rules and procedures apply when FS employees are involved (PPE, flight following, etc.). Regular Army helicopters can be used, but only with prior approval from the RAO and only on a case-by-case basis.

I. Landing Areas (Helicopter). Use of helispots must be in accordance with IHOG requirements.

J. Altitude. A minimum operational flight altitude of 500 feet above the terrain must be maintained except for takeoffs and landings.

K. Night Operations. Search and rescue operations are only authorized between 30-minutes before official sunrise to 30-minutes after official sunset.

L. Flight Minimums. All VFR flights must meet 14 CFR Part 91 visibility requirements. Over the top operations are not authorized.

M. Load Calculations and Manifests. When utilizing aircraft other than military, load calculations and manifests are required. When utilizing a military aircraft, use of the Performance Planning Card (PPC) is acceptable along with a manifest. Load calculations will be made prior to flight. It is the responsibility of the pilot, however FS personnel must ensure this is done. A copy of the manifest and load calculation is kept on the ground until the flight is terminated. Passenger changes need to be documented.

N. Emergency and Covert Operations. The Center Manager or assistant shall be notified of emergency and covert FS Law Enforcement aviation missions (to include flights benefiting FS law enforcement missions, but where FS employees are not on board the aircraft) on the Forest by the RPC, ASAC or SAC, duty officer or assigned aviation manager. The GACC Manager will be given the information the day of the mission and will ensure that the mission security is maintained. Undercover operations will be coordinated through the Regional Office, Law Enforcement and Investigation (LE&I) so that confidentiality will be ensured. It is the responsibility of the Regional LE&I to coordinate with the RAO when missions are of this nature.

O. Unapproved Aircraft/ Pilots. In certain emergency situations (special investigations, or undercover operations), it may be necessary for personnel to ride in unapproved aircraft/or with unapproved pilots. In these situations the flight(s) may be authorized by the Regional Aviation Officer (FSM 5712.34) as appropriate. Any such occurrence shall have a written justification prepared and attached to an agency Safecom, and submitted to the Special Agent in Charge within 24-hours of the completion of the mission.

P. Cooperative Agency Aviation Operations. Cooperative agency conducting law enforcement operations on the Forest shall be encouraged to notify the Dispatch Center Manager or PC, RPC, ASAC or SAC of missions over FS Lands.

Q. Briefing Requirements. As a minimum the following areas will be discussed with all flight participants prior to each mission.

1. Risk management and mitigation
2. Mission/Flight Hazards
3. Personnel Responsibilities/Authorities
4. Flight/Duty Limitations
5. Flight Plan/Flight Following
6. Pilot/Aircraft Data Card

7. Personal Protective Equipment
8. Five Steps To A Safe Flight (Form FS 5700-16)
 - Aircraft Hazards
 - Seat Belt & Harness
 - ELT & Survival Kit
 - First Aid Kit
 - Gear & Cargo Security
 - Fire Extinguisher
 - Fuel & Electrical Shut-off
 - Oxygen Equipment
 - Emergency Egress
 - Smoking
9. Communications
10. Firearms Safety
11. Radios
12. Landing Areas
 - Note: Wilderness landing areas require Forest Supervisor/Regional Forester approval(s).
13. Load Calculations/Manifests
14. Mishap Notification Procedures
15. Weather/Hazards
16. External Load Procedures
17. HazMat Procedures
18. Explosive Ordnance Demolition (EOD) Procedures.
19. Military Training Routes/Temporary Flight Restrictions

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5.28 Unmanned Aerial Systems (UAS)

National and Regional Fire and Aviation Management recognizes the potential for increased Unmanned Aerial System operations and that that establishing a program is critical.

UAS operating in the national airspace system are considered by the Federal Aviation Administration (FAA) as aircraft, regardless of size; therefore, UAS executing FS missions are required to adhere to FAA requirements and Forest Service policy. These requirements are similar to manned aircraft in terms of pilot training, currency and certification, airworthiness approval, avionics, and operational restrictions.

The agency UAS Operations Guide is currently under development and will be widely distributed when finalized. Since this program is new to the FS, Fire and Aviation Management intends to proceed cautiously.

While UAS program-related policy ([FSM 5713.7](#)) and integration matures, any planned use (including through agreements, acquisition proposals, or leasing proposals) needs to be coordinated with the appropriate Regional Aviation Officer and with Washington Office, Fire and Aviation Management UAS Program Manager.

Forest Service requests to the FAA for UAS Certificates of Waiver or Authorization (COA) will be coordinated through the Washington Office, Fire and Aviation Management UAS Program Manager. Other agencies that have received a COA from the FAA can be considered Cooperator aircraft ([FSM 5710.35](#)). UAS operated by cooperators (including the military) in support of Forest Service missions are subject to the approval requirements in [FSM 5713.7](#) and shall meet additional requirements established in the [FSM 5713.43](#).

Regional Supplement

Contact the RAO for the Region 1 point of contact for UAS operations. See also appendix 10.21: UAS supplement

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5.29 Forest Health Protection (FHP) Operations

FHP utilizes light fixed and rotor wing aircraft to conduct aerial reconnaissance, aerial photography and aerial application. The purpose of these operations is to gather information regarding forest health conditions and manage pests in accordance with [FSM 2100](#) and [FSM 3400](#).

All FHP aviation operations should be coordinated with the appropriate Regional Aviation Officer. Dispatch, ordering, and operations are accomplished in accordance with the local geographic area and [National Mobilization Guide](#) and the [Interagency Helicopter Operations Guide \(IHOG\)](#).

For all non-fire flights, the [Interagency Aviation Training Guide](#) provides minimum training standards for fixed-wing flight managers (FWFM) in charge of point-to-point and FWFM Special-Use mission flights. Additional training required by FHP and the FWFM Special-Use Aerial Survey Observer Task Book are available at www.fs.fed.us/foresthealth/aviation/training.shtml. All aerial reconnaissance and photography mission flights shall utilize a qualified FWFM Special-Use for fixed wing and qualified Helicopter Manager for rotor wing. Agency personnel are not permitted on board restricted category aerial application aircraft and full PPE is required for aerial application pilots operating low level.

Regional Supplement

Forest Health/Resource Aviation

See [Project Aviation Safety Plan for Forest Health Protection Aerial Detection Survey Information](#).

5.30 Aerial Firefighting Use and Effectiveness (AFUE) Study Aviation Operations

The Aerial Firefighting Use and Effectiveness (AFUE) Study was initiated in 2012 in order to develop and implement performance metrics to analyze aircraft utilized for aerial suppression. The Study is supported by the Fire Executive Council, Fire Management Board, and the National Association of State Foresters.

The mission of the AFUE Study aircraft is to capture firefighting aircraft drops using an onboard sensor so that the drops' effectiveness in meeting tactical and strategic objectives can be evaluated.

The Study's aircraft does not execute the ATGS mission, is not resourced through ROSS, and its operations are not funded by specific fires or local units. AFUE Study ground and aviation resources preposition based on Predictive Services' National 7-Day Significant Fire Potential outlooks and current and expected fire activity. The Study then self-dispatches to wildfire incidents based on a combination of its dynamic data collection priorities and aviation resources ordered to specific wildfires.

Data collected from this Study and from other sources will eventually be utilized to inform decisions that determine the composition of the federal interagency aircraft fleet that supports the management of wildland fire.

5.30.1 AFUE Study Aircraft Incident Airspace De-confliction

The Study's pressurized airplane executes a passive data collection mission orbiting over the fire at 10,000ft above ground level (AGL). On occasion, the aircraft may descend to an altitude *no lower than* 8,500ft AGL in order to acquire smaller aerial suppression aircraft. The aircraft does not check in, nor normally communicate, with aerial supervisors; however, if communication is required, its call sign is "AFUE Aircraft" (tail number TBA).

6.0 Aviation Training

6.1 Aviation Training for All Flight Activities and Positions

Aviation training is essential to aircraft pilots (both contract and employee), aviation users, supervisors, and managers to ensure that they are knowledgeable of the inherent hazards of aviation operations. The Forest Service Aviation Training Program is a "fire" and "non-fire" system. The [National Wildland Coordinating Group PMS 310-1](#) and [Forest Service Fire and Aviation Qualifications Guide](#) directs the fire qualifications ([FSH 5109.17](#)), while the [Interagency Aviation Training Guide](#) regulates the "non-fire" qualifications. Personnel serving in NWCG positions need only meet the qualification and currency requirements

required in [Forest Service Fire and Aviation Qualifications Guide](#) / [National Wildland Coordinating Group PMS 310-1](#) or other interagency guidance as appropriate ([Interagency Aerial Supervision Guide \(IASG\)](#), etc.).

The objectives of selection, recruitment, development and training are to improve safety, quality and efficiency by placing employees in jobs to which they are suited and qualified. Although this concept is obvious, it is fundamental at all levels within an agency and worthy of emphasis. The appropriate experience and training requirements for safety-related posts much be defined, monitored and recorded.

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Aviation Training: Managers, supervisors and employees who are pursuing new or additional qualifications shall use the FS Fire and Aviation Qualifications Guide and the Interagency Aviation Training Guide to determine minimum course and currency requirements at the full performance level for Forest Service personnel involved in aviation operations.

Training is clearly one of the most important factors in safe and successful aviation operations. It is essential that, in addition to aircraft pilots, aviation users, supervisors, and managers be knowledgeable of the inherent hazards and risks of aviation operations.

Forest Service management is dedicated to conducting or providing for professional and technical training of employees in all levels of the organization that use and/or influence the use of aviation resources. Each operating unit develops and implements plans for the identification of initial and recurrent aviation training needs specific to its mission.

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6.2 Responsibility

The Washington Office, Branch Chief, Aviation Safety Management Systems is responsible for national oversight of the aviation safety education program and aviation accident prevention efforts ([FSM 5720.45](#)).

It is management's responsibility to provide training and career development opportunities to personnel under its control, to expand, improve, correct deficiencies, or meet job performance requirements.

It is every employee's responsibility to take advantage of aviation training opportunities and to notify their supervisor of any aviation training they believe they require for accomplishing their jobs safely and efficiently.

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6.3 Instructor Standards

Aviation trainers provide specialized training in many aviation job skills, e.g., helitack, aerial attack, SEAT management, air tanker base management, aerial ignition, rappel, and helicopter management. The Interagency Aviation Training (IAT) guide identifies position training requirements for non-fire aviation functions. Specialized training courses can be accessed on the [IAT website](#).

Personnel serving in NWCG instructor positions need to meet the qualification and currency requirements in [Forest Service Fire and Aviation Qualifications Guide](#) and the [PMS 901-1 Field Manager's Course Guide](#).

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6.4 Records Management

All employee training records shall meet the requirements stated in the [Forest Service Fire and Aviation Qualifications Guide](#) for all NWCG qualifications. All training records for non-fire qualifications (IAT) shall either reside with the Training Officer or the Forest Aviation Officer.

Each operating unit needs to develop and implement plans for the identification of initial and recurrent aviation training needs specific to its missions.

Areas of aviation training are:

- Orientation and basic aviation safety for all users
- Flight Manager Training
- Dispatching and flight-following procedures
- Management of aviation operations and equipment
- Planning, risk assessment and execution of projects using aviation resources
- Proficiency and special mission training for pilots
- Technical training on aviation equipment and aircraft maintenance
- Advanced safety management systems (SMS) and quality assurance for aviation professionals and specialists

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6.5 Tuition and Travel

Forest Service management is dedicated to conducting or providing for professional and technical training of employee or contract personnel at all levels of the organization that use and/or influence the use of aviation resources. Supervisors are to provide adequate levels of funding for the tuition and travel to attend training that will maintain aviation personnel currency and advance their skills.

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6.6 Development

The Forest Service encourages development of interested personnel who desire to pursue an aviation career path. Developmental positions (e.g., Regional Aviation Management Specialists) and all positions that have aviation operations responsibility are encouraged to attend [Aviation Safety Management Systems](#)-related training.

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6.7 IAT/NWCG Crosswalk

NWCG/Forest Service Fire and Aviation Qualifications Guide	IAT Resource Qualifications
HECM	Aircrew Member
ACDP	Aircraft Dispatcher
AOBD, ASGS, ATGS	Aviation Manager
AOBD, ASGS, ATGS, HLCO	Fixed-Wing Flight Manager –Special Use
HMGB	Helicopter Manager-Resource
AOBD, ASGS, HEB1/2	Project Aviation Manager
AOBD	Supervisor

The positions listed in the NWCG / [Forest Service Fire and Aviation Qualifications Guide](#) Qualifications column will crosswalk into the non-fire IAT Resource Qualifications.

If individuals do not meet the NWCG / [Forest Service Fire and Aviation Qualifications Guide](#) Qualifications (above), they shall follow the training requirements found in the IAT Guide in order to conduct/oversee non-fire resource aviation operations.

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6.8 Aviation Contracting Officer Representative (COR) Requirements

Aviation COR's must meet initial training and maintenance requirements as stipulated in Agency Acquisition Regulations (AGAR).

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6.9 Crew Resource Management (CRM) Training

Refer to the [National Incident Management System Wildland Fire Qualification System Guide, PMS 310-1](#), and [Forest Service Fire & Aviation Qualification Guide \(FSFAQG\)](#) in order to determine which aircrew positions require N9059-Crew Resource Management 7 Skills training.

7.0 Airspace Coordination

7.1 Interagency Airspace Coordination

Interagency airspace coordination is accomplished through the Interagency Airspace Steering Committee (IASC) chartered under the National Interagency Aviation Council (NIAC). Guidance and education is provided through the [Interagency Airspace Coordination Guide](#).

Regional Supplement

[Airspace Restrictions](#)

1. Temporary Flight Restrictions (TFRs) and Notices to Airmen (NOTAM) shall be coordinated through the appropriate dispatch centers to the Geographic Area Coordination Center.

2. Deconfliction of local airspace operations (military training routes, MOA's, Agricultural air operations) will be completed by the local coordination center.

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7.2 Fire Traffic Area (FTA)

The FTA provides a standardized initial attack sequence structure to enhance air traffic separation over wildfire or all-hazard incidents. The structure emphasizes established communications, clearances and compliances. The FTA process will be used by all tactical aircraft. The local dispatch center will be the initial point of contact for aviation resources approaching and departing the FTA when no aerial supervision is in place. If aerial supervision is not on scene, the first responding aircraft must establish / control the FTA until aerial supervision arrives, as specified in the [Interagency Aerial Supervision Guide \(IASG\)](#).

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7.3 Temporary Flight Restriction (TFR)

In order to enhance safety during an incident, the FAA may be requested to issue a TFR that closes the airspace to non-participating aircraft (with some exceptions). While there are currently nine different types of TFR's, the most commonly issued TFR for wildfire is [14 CFR 91.137 \(a\) 2](#) which is explicit as to what operations are prohibited, restricted, or allowed. Aviation Managers requesting a TFR should be familiar with the ordering procedures, coordination protocol and exceptions that are outlined in Chapter 6 of the [Interagency Airspace Coordination Guide](#).

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7.4 Aircraft Transponder Code (Firefighting)

The FAA has provided the 1255 Transponder code as the national designation for firefighting aircraft. It is not agency specific. The code should be utilized by aircraft responding to and operating over fire incidents supporting suppression operations (unless otherwise directed by Air Traffic Control (ATC). It is not to be used for repositioning or during cross-country flights.

Regional Supplement

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7.5 Airspace Boundary Plan

When resources are dispatched by more than one unit to an incident that shares a common boundary, care should be taken to ensure safe separation and communication of responding aircraft. Boundary Plans should be prepared that focus on a 10 NM wide “neutral airspace” corridor for mutual or exchanged initial attack area’s or zones.

7.5.1 International Airspace Boundary – Mexico

Aircraft entering Mexican airspace must follow established protocols and communicate mission details to the appropriate Interagency Dispatch Center. Aircraft must not enter Mexican airspace without consent from the coordinating authorities and concurrence from the identified aerial supervision. Permission must be received from National Forestry Commission of Mexico (CONAFOR) prior to entering Mexican airspace.

7.5.2 International Airspace Boundary – Canada

Aviation operations across the U.S.A./Canada border must be conducted in accordance with The Canada/United States Reciprocal Forest Fire Fighting Arrangement (NMG chapter 40) or the normal US Customs and Border Protection procedures. Flights must follow protocol established by the respective coordinating authorities and involve the appropriate Dispatch Center. Such flights usually require prior notification, special tracking procedures and an understanding of the mutually agreed upon operating parameters.

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7.6 Airspace De-confliction

Airspace de-confliction can occur for both emergency response and non-emergency aviation activities.

De-confliction can be accomplished through the following measures:

- Pilots must obtain all information pertinent to flight before flying. This is accomplished by obtaining a briefing from the FAA through the Flight Service Stations. This is the official source of NOTAM information.
- Dispatching units may obtain scheduling information from DOD units that have Special Use Airspace or Military Training Routes and share this information as “hazards” information on the Resource Order when the aircraft is dispatched. For non-emergency flights, information may be shared through common communication protocol.
- Aviation Internet websites are prolific on the internet. When used for obtaining airspace information, the user must be aware of any disclaimers regarding the timeliness of the information posted. The FAA’s US NOTAM office provides current TFR information through DINS (DOD Internet NOTAM Service) at <https://www.notams.faa.gov>.

Regional Supplement

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Forest Supplement

Placeholder.

7.7 Airspace Conflicts

Aviation personnel have a responsibility to identify and report conflicts and incidents through the [Interagency SAFECOM \(Safety Communication\) System](#) to assist in the resolution of airspace conflicts. When a conflict or incident occurs, it may indicate a significant aviation safety hazard. Conflicts may include Near Mid Air Collisions (NMAC), TFR intrusions, and FTA communication non-compliance. Further guidance is available in Chapter 8 of the [Interagency Airspace Coordination Guide](#).

Regional Supplement

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Forest Supplement

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7.8 Airspace Agreements – Memorandums of Understanding

When Special Use Airspace (SUA’s), Military Training Routes (MTR’s), Slow Routes (SR’s), or Aerial Refueling Routes (AR’s) are located over lands within an agency’s jurisdiction or

within their area of normal flight operations (fire or non-fire), the agency should consider instituting an agreement with the appropriate DoD entity that schedules the airspace. Airspace agreements establish protocol for emergency and non-emergency contacts. They provide local level leadership a tool that defines protocols to address recurring activities, coordination of time critical responses, deconfliction and resolving issues in a timely manner. Initiation of an agreement can begin by contacting the Military Representative to the FAA located at FAA Service Centers, Air Force Representative, Navy Representative, and Department of Army Representative. A template and sample format is provided in Chapter 12 of the [Interagency Airspace Coordination Guide](#).

Regional Supplement

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8.0 Aviation Security

8.1 Aviation Security

The policies and procedures in this chapter when implemented are intended to make the theft of FS aircraft more difficult and time consuming and therefore reduce the threat to our facilities from criminal elements.

The FS will provide an aviation security program that will include:

- Aviation facilities and aircraft security standards
- Aviation security measures that respond to alerts of the Homeland Security National Terrorism Advisory System (NTAS)
- Quick response emergency procedures

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

8.2 FS Facilities Security Risk Assessments

Each Forest Service aviation facility must complete a risk assessment on a timeline based on its Facility Security Level (FSL) to determine the security standard. The FSL can be determined using the document Facility Security Level Determinations for Federal Facilities, An Interagency Security Committee Standard.

The risk assessment must include an analysis of:

- The vulnerability level of the facility, which is any weakness in the design or operation of a facility that can be exploited by an adversary.
- The probability of threat, or the likelihood of an undesirable event occurring over time.
- The severity of event consequences, which is the level, duration, and nature of the loss resulting from an undesirable event.

Reference the [FSH 5709.16 Chapter 60](#) for the FS Risk Assessment.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

8.3 FS Security Response Actions

The objective is to ensure that the FS is prepared to increase security standards at agency aviation facilities in response to an alert of the Homeland Security National Terrorism Advisory System.

It is FS policy to immediately adjust the level of aviation security any time an NTAS Alert is issued for the facility.

Regional Supplement

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Forest Supplement

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8.4 General Aviation Security Awareness Programs

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8.5 Aircraft Security Information (Cooperators)

The security of cooperator provided aircraft and equipment is the responsibility of the cooperator.

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Forest Supplement

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8.6 TSA Commercial Airport Security

Commercial airport security requirements can be found at the [Transportation Security Administration \(TSA\)](#) web site.

9.0 Aviation Facilities

9.1 General

All facilities managers are responsible for providing aviation facilities, within their respective area, that are safe, adequate, and are in compliance with applicable Forest Service regulations.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.2 Permanent Aviation Facilities

These facilities (helibases, retardant bases, and airport facilities) are permanent installations (owned and leased) and are used on a continuous or seasonal basis for aviation operations. These include aviation facilities on Forest Service property and facilities on non-Forest Service land where Forest Service has primary responsibility for operations, maintenance, and oversight. Facility base reviews shall be conducted in accordance with Appendix E of the [Interagency Helicopter Operations Guide \(IHOG\)](#); Chapter 5 Section B of the [Interagency Airtanker Base Operations Guide \(IATBOG\)](#); and Chapter 8 of the [Interagency Standards for Fire and Fire Aviation Operations](#).

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.3 Temporary Aviation Facilities

Temporary bases are sites that are used on a temporary or intermittent basis (helispots and remote airstrips). Sites not located on Forest Service land must be pre-approved and use shall be documented in an Agreement. Each site should be cataloged as to location, description, local hazards, use procedures, agreements, and contacts. Preseason inspection and maintenance should be completed as necessary to meet agency safety requirements.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.4 Safety

Aviation facilities must comply with safety regulations outlined in Forest Service manuals, guides, handbooks, and the Occupational Safety and Health Act (OSHA).

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.5 Agency Owned/ Operated Facilities

Refer to the [Building and Facilities Related Handbook FSH 7309.11](#) for information regarding:

- Planning
- Development
- Management
- Special-Use Facilities
- Records and Reports

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.6 Agency Owned/Operated Airstrips

RESERVED

Regional Supplement

(see appendix 10.20: Region 1 Backcountry Airstrip Supplement)

Forest Supplement

Placeholder.

9.7 Leasing

Leased facility needs can be met through the Acquisition Management (AQM) organization, either via lease or grants and agreements. These are more fully described on the AQM website: <http://fsweb.wo.fs.fed.us/aqm/>. Facilities can also be acquired on Government-owned land by means of land exchanges.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.8 Funding

RESERVED

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.9 Land Use Agreements

Simplified acquisition procedures should be used to acquire the use of property or facilities for emergency incidents. Emergency incident agreements do not require special leasing authority. Procurement officials with warrant authority may enter into these agreements. More detailed information is available in Chapter 20 of the [Interagency Incident Business Management Handbook](#).

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

9.10 Facilities Security

All sites will be provided with appropriate physical security measures commensurate with the risk of loss of operating capability, irreplaceable data, or expensive property ([FSH 7309.11, 41.2](#)).

- Equip all buildings with locks. The keys shall be managed by the facility manager or other individual designated by the line officer. Where emergency access by non-unit personnel is necessary for fire management and other common occurrences, use master locks.
- Install signs and fences and/or provide other physical deterrents to warn and retard entry to all remote sites containing vulnerable operations such as telecommunications and research projects. Consider maintainability in the design of fences in areas subject to heavy snow, ice, and wind conditions.
- Restrict entry of unauthorized personnel into operations such as flammable, chemical and pesticide storage rooms or buildings, explosive storage facilities, computer rooms, biologically sensitive and controlled-environment areas, and others as the facility manager and policy deem necessary.

Refer to Chapter 8 of this document and [FSM 5709.16 Chapter 60](#) (Aviation Security) for additional facilities security.

Regional Supplement

Placeholder.

Forest Supplement

Placeholder.

10.0 Appendix

10.1 Sample Letter of Cooperator Approval

RESERVED

10.2 Cooperator Approval Guide

RESERVED

10.3 Authorization for Law Enforcement and Investigations Employees to Fly on Department of Justice (DOJ) and Department of Homeland Security (DHS) Aircraft



Forest
Service

Washington
Office

1400 Independence Avenue, SW
Washington, DC 20250

File Code: 5300/5700

Date: May 20, 2013

Route To:

Subject: Authorization for Law Enforcement and Investigations Employees to Fly on Department of Justice (DOJ) and Department of Homeland Security (DHS) Aircraft

To: Director, Law Enforcement and Investigations

This letter will permit Forest Service (FS) Law Enforcement & Investigations (LEI) employees on official duty to fly aboard Department of Justice (DOJ) and Department of Homeland Security (DHS) owned and operated aircraft while performing joint law enforcement operations and coordinating missions with the respective agencies.

Agreements with DOJ and DHS regarding joint law enforcement aviation operations should be used to provide overall operational requirements and procedures for all agencies.

This letter specific to DOJ and DHS owned and operated aircraft used by FS LEI employees on official duty will meet the intent of FS Manual (FSM) 5704.9 which requires that all FS employees "shall fly only in approved government (refer to Government Aircraft definition in FSM 5705) aircraft flown by an approved pilot(s)."

The FS law enforcement program has unique mission requirements and a need for close interagency coordination and cooperation with the DOJ and DHS.

Field-level LEI employees are required to notify the Regional Special Agent-in-Charge and Washington Office employees the Director of LEI, when using this approval.

The Director of LEI is responsible for ensuring overall employee safety under this exemption.

This letter rescinds the Flight Authorization on Department of Homeland Security Aircraft letter dated May 20, 2008.

/s/ James E. Hubbard

JAMES E. HUBBARD
Deputy Chief, State and Private Forestry

cc: Robert A Baird, Dan Olsen, Ron Hanks, John A Nelson, Thomas A Cook, Tom Harbour, Ezequiel N Parrilla, Caleb A Berry



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10.4 Fixed Wing Aircraft Passenger Manifest Form

RESERVED

Regional Supplement

10.5 Project Proposal Template

Note: The template begins on the following page.



**USDA Forest Service
Fire & Aviation Management
Aviation Division**

**PROJECT or PROGRAM or ISSUE
PROPOSAL NAME**



Forest Service

Month 20XX

Table of Contents

1. General Process Information.....	
2. Introduction	
2.1 Problem Statement.....	
2.2 Background	
2.3 Challenges	
2.4 Objective(s)	
2.5 Deliverables	
3. Proposed Method.....	
3.1 Requirements	
3.2 Technology	
3.3 Implementation Method	
3.4 Risk and Quality Assurance.....	
4. Expected Project Results	
4.1 Performance Measures	
5. Action Plan and Timeline	

1.0 General Process Information

This Project, Program, Issue Proposal Template (PPT) is included in the National Aviation Safety and Management Plan (NASMP).

Utilize the PPT when proposing the following:

- New equipment, e.g., aircraft, parachute, etc.
- New contractor contract change, e.g., VLAT, LFS Helicopter, etc.
- New agreement or MOUs.
- New process or changed process, e.g., rappel standardization, RADS, etc.
- Deviation from standards, e.g., LEI exemption, etc.
- New or changed policy, e.g., doctrinal policy changes, 100 hr, turbine single engine, etc.
- New or changed procedure, e.g., rappel procedures.
- New program, e.g., UAS, etc.

Questions regarding the PPT and development of a proposal should be directed to the Branch Chief, Aviation Business Operations, 202-205-0974.

Completed PPTs will be forwarded to the Branch Chief, Aviation Business Operations by email. Call the number above to get a current email address.

The project, program, issue proposal process will follow steps outlined in Section 3.3 of the NASMP.

2.0 Introduction

Summarize briefly the problem/issue, project objective(s), and expected benefit(s) and cost of the proposal. Is the problem/issue an entire system or a sub-system element?¹

2.1 Problem Statement

Describe the problem/issue in terms of system or sub-system.

What does the problem/issue affect (who and/or what)? What are the impacts (safety, cost, risk, lack of standardization, etc.) of the problem/issue?

¹ A system is an integrated set of integral elements that are combined in an operational or program to accomplish a defined objective. These elements include personnel, aircraft, facilities, technology, facilities, human factors, operations, procedures, equipment, services, and other components. Sub-systems are integral to the operation and function of the system. E.g. performance, capability and specialized equipment for the mission would be sub-systems of an aircraft system.

2.2 Background

Describe the background information about the project. Provide only factual information, observations or opinions should be noted as such.

2.3 Challenges

Describe the known challenges of the existing system or sub-system to be addressed by the project.

2.4 Objective(s)

Identify specific and measurable objectives of what the project is anticipated to achieve. Identify any anticipated changes in the system or sub-system.

2.5 Deliverables

Identify the tangible and verifiable product or service that meets the objectives stated above.

3.0 Proposed Method

Describe and define the technical and/or non-technical aspects of the proposal. This section should include a description of the methodology to be used to complete the project, a specific plan for gathering requirements, design requirements, information technology requirements best practices for implementation, and quality assurance.

3.1 Requirements

Describe the requirements for the proposal. Requirements are quantifiable functional and technical needs of the proposal. Include diagrams or charts to visually display the information if applicable.

3.2 Technology

Describe any technology required to implement the project. Describe hardware, software, or network components as relevant and as understood at this time. Include diagrams or charts to visually display the proposed system components and the relationships between them.

3.3 Implementation Method

Describe your methodology for implementation, including best practices.

3.4 Risk and Quality Assurance

Describe the potential risks (financial, business, cultural, operational, safety, etc.) related the project.

Describe the examples of quality assurance that would be used to mitigate risks.

4.0 Expected Project Results

Using the objectives and deliverables listed in section 1 describe the technical, operational, cultural and behavior changes the project would implement.

4.1 Performance Measures

Complete the Performance Measure table below based on the objectives of the project. Describe an assessment plan to monitor Performance Goals over time.

Metric #	Year Initiated	Performance Baseline	Performance Goal	Actual Result
1	2014	The status quo needs 345 hours consuming 207 thousand gallons to fly 100,000 miles	Fuel use for the same distance is reduced by 10 percent	Do not complete

5.0 Action Plan and Timeline

Develop a draft action plan for the project.

Action Steps What will be done?	Responsibilities Who is the lead?	Deadline By when? (mm/dd/yy)	Resources Resources available? Resources needed (financial, human, political & other)?	Potential barriers Individuals or organizations? Mitigation?	Communications Plan Who is involved? What methods? How often?

RASMP Appendices:

- 10.11 **Use of FS owned, contracted, or leased A/C for airshows**
- 10.12 **Workforce plan**
- 10.13 **PASP template**
- 10.14 **RAO delegations to FAO/UAO and RASM to review PASPs**
- 10.15 **FAO meeting/conf call SOPs**
- 10.16 **Helicopter PPE waiver**
- 10.17 **Region 1 Pilot Training and Operations Guide**
- 10.18 **Region 1 Aviation Safety and Technical Assistance Team (ASTAT) handbook**
- 10.19 **NRCG letter on Aquatic Invasive Species**
- 10.20 **Region 1 Backcountry Airstrip Supplement**

10.11 Use of FS owned, contracted, or leased A/C for airshows



Forest
Service

Washington Office

1400 Independence Avenue, SW
Washington, DC 20250

File Code: 5700

Date: March 23, 2015

Route To:

Subject: Use of Forest Service owned, Contracted, or Leased Aircraft for Airshow
Static Display or Flight Demonstrations

To: Regional Fire Directors, Regional Aviation Officers, Regional Aviation Safety
Officers

No current Forest Service (FS) policy directs the use of Agency-owned and operated, contracted, or leased aircraft for airshows, fly-ins, or other public aviation events. The FS is re-writing the FS Manual 5700 and the Forest Service Handbook 5709.16. A section related to this topic will be included, but it will not be finalized until 2016. Until then, this letter shall be policy per FSM 5704.1.

We should be very selective in our participation in displays and airshows. We will not accept every invitation. We need to be sensitive to public perception of any level of participation. When we do accept invitations they should cover a broader geographic area and number of events over time. The priority is to use Agency-owned aircraft, which are a visible symbol of the FS. When firefighting aircraft or firefighters are involved, participation should be conditional on geographic area and national aviation and firefighter response needs, priorities, and workload.

Any participation in airshows, fly-ins, or other public demonstrations is an opportunity to tell the Forest Service story. Topics would include information about the Agency's mission to sustain the health, diversity, and productivity of the nation's forests and grasslands and the diverse workforce that implements the mission. When fire management aircraft are involved, we should include the broader fire management story of prevention, suppression, prescribed fire, and fuels management. When appropriate, information of interest to general aviation about Temporary Flight Restrictions and Fire Traffic Areas should be included. When possible, we should invite and/or include our partner and cooperator agencies.

Approval Process

Use of Agency-owned, contracted, or leased aircraft for static displays or flight/aerial demonstrations (fly-bys, water dropping, parachute jumps, rappelling or other aerial demonstrations) shall be requested 60 days in advance, by letter, to the Washington Office (WO), Assistant Director, Aviation. A written request shall originate from a WO Staff Director or Regional Fire Director and include the following documents:

- Formal request from the private/public organization requesting Forest Service participation in the static display or flight/aerial demonstration.
- Final Draft Project Aviation Safety Plan (PASP). Approval of the PASP will occur if the request is approved.
- Static Display or Flight/Aerial Demonstration Plan to include objectives, risks (financial, operational and public perception) detailed flight plans (including to and from the event and event flights), estimated costs, pilot designations, and Forest Service messages to be included.

If the request includes contracted or leased aircraft, the appropriate Contracting Officer will also be included in the approval process by WO FAM.

Requests from Stations or Northeastern Area will be coordinated through the appropriate Region.

Approval of the request will be by the WO Director, Fire and Aviation Management (FAM).

Please contact Art Hinaman at awhinaman@fs.fed.us or (202) 205-1505 with additional questions.

/s/ James E. Hubbard

JAMES HUBBARD
Deputy Chief for State & Private Forestry

cc: John A. Nelson, Thomas A. Ricks, Walker D. Craig, Dan Olsen, Arthur W. Hinaman, Tom Harbour

10.12 **Workforce plan** (under development)

(click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)

10.13 **PASP template**

This is a minimum recommended template for PASPs in R1. Supplement as needed.
(click the following link to go the latest template on the R1 aviation sharepoint site)

[R1 PASP template](#)

10.14 RAO delegations to FAO/UAO and RASM to review PASPs
(click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)

10.15 **FAO meeting/conf call SOPs and call template** (click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)

Northern Region Aviation Group—Coordination and Meeting Schedule SOPs

The Northern Region R-1 Aviation Group will generally consist of the Regional Aviation Officer, Regional Aviation Safety Manager, Helicopter Operations Specialist, Fixed Wing Specialist and Forest Aviation Officers. Additional participants may include NRCC Aircraft Coordinators, Air Tactical Coordinator, Smokejumper Base Managers, subject matter experts and representatives from other aviation groups. In an effort to facilitate the productive use of participant's time, the following guidelines will be apply to meetings and conference calls:

- Two main meetings a year (mid-March and mid-October)
- Monthly Conference call (generally October-June)
- Daily conference calls (generally July-September, or as activity warrants)
- After Action Reviews with vendors (generally in November)

Main Meetings—FAOs and RO Aviation Staff

Spring—mid March. Primary location will be Missoula

Fall—mid October. Primary location will be Missoula

These will be the primary FAO/RO meetings for the year. A rotating FAO* will be responsible for coordinating with the RO to build the agenda and set up any logistical needs—a rotation will consist of coordinating the Spring (March) meeting followed by the Fall (October) meeting. Facilitation of each meeting will be provided by the RO aviation group. Notetaker will be provided by the FAO responsible for the meeting coordination. Open invite will be offered to any FFMO; specific invite to FFMO Reps to the ADFG Group. The general intent of the meetings are as follows:

Spring (mid-March)—Overall focus on topics and information that will prepare the aviation group for the upcoming season. Report out of any working groups generated from prior meeting or task requests from the FMO group. Info sharing from changes generated at the RO/WO level and updates from the units to the group and regional aviation managers. Additional topics determined from specific needs to be prepared for upcoming season.

Fall (mid-October)—Overall focus on identifying issues generated from the previous season. Issues will be addressed as needing further tasking and/or development, discussion/decision, and where the appropriate level of engagement is (i.e Regional Office Aviation group, Regional FMO group, Incident Business Group, ADFG Group, etc, etc.). Meeting is intended to occur prior to the Regional FFMO meeting in order to be prepared with issues, concerns, opportunities that need to be addressed by or presented to the Regional FFMO group. An FAO (s) will be identified to attend the FFMO meeting as a formal rep of the FAO group—this will generally be determined based on specific topics being forwarded.

Monthly Conference Calls—FAOs and RO Staff

Second Thursday of the month (after the FFMO calls). Calls will generally consist of round robin updates, information sharing and to address any pertinent issues or concerns (reference the NR Aviation Conference Call sheet for general topic format). Coordinator will rotate between Forest Aviation Officers* and the Regional Office in the following order:

October-January: Forest Aviation Officer

February-June: Forest Aviation Officer (next in the rotation)

July-September: Regional Office Staff (calls may be daily or weekly based on activity)

Coordinator will build agenda, confirm phone line, send out reminders and be responsible for providing notes. This is a monthly call facilitated by the rotating FAO for Forest Service Regional and Forest aviation personnel from October-June, and becomes the daily or weekly inter-agency aviation coordination call facilitated by the RAO during fire season (generally July-September). The Northern Rockies Aviation Conference Call sheet may be utilized to help organize the call and record notes.

After Action Review

One day meeting held in Missoula that includes contractors, cooperators, operations, contracting, dispatch and coordination center personnel with the intent of identifying successes, issues, and concerns in review of the previous fire season. RO staff will build the agenda, invite the participants, coordinate logistics and facilitate the meeting. Generally would occur in late October or early November.

***Rotation for FAO Coordination (co-coordinator/back-up coordinator is the next FAO in line).**

(Regional Coordination July-September)

1. Beaverhead/Deerlodge National Forest (Oct'17-Jun'18, nine month startup stretch)
2. Bitterroot National Forest (Oct'18-Feb'19)
3. Custer/Gallatin National Forest (Mar'19-Jun'19)
4. Flathead/Kootenai National Forests (Oct'19-Feb'20)
5. Helena/Lewis & Clark National Forests (Mar'20-Jun'20)
6. Idaho Panhandle National Forests (Oct'20-Feb'21)
7. Lolo National Forest (Mar'21-Jun'21)
8. Nez Perce/Clearwater NF (Oct'21-Feb'22)

(last update: 5/15/18)

Northern Rockies Aviation Conference Call

Call 888-844-9904; participant Pass code 5852943#; host Pass code 8317349# when prompted

Date/time:

(In attendance)

B-D	Bitterroot	Cust/Gallatin	Flat/Koot	IPNF	Helena/L+C
<input type="checkbox"/>					
Lolo	Nez/Clear	Dak-Prairie	IDL**	DNRC**	BLM**
<input type="checkbox"/>					
RAO	HOS	FWOS	RASM	NRCC-aircraft	Other
<input type="checkbox"/>					

** (other agencies on summer interagency call only)

(Agenda and Notes)

Facilitator section:

Emphasis items for this call:

Current Situation in the Northern Rockies—general overview:

Resources in the region:

Past Business—previous taskings...progress.

Follow up on previous calls/notes/meetings:

Units section—updates and round robin from UAO's:

(avoid fire updates unless pertinent to the greater discussion. Focus on aviation: Resources--needed and/or available to share; training opportunities; issues; concerns)

Regional section—updates and round robin from regional office personnel:

All

Risk Management—comments on Regional/Unit situation, Airspace, Frequencies, etc:

Facilitator:

Training and Aviation Development—Regional and Unit opportunities:

Taskings—new, continuing, and future business:

Confirm next call/meeting. Posting or mailing of notes

(version: 5/15/18)

10.16 Helicopter PPE waiver



Forest Service

Washington Office

1400 Independence Avenue, SW
Washington, D.C. 20250

File Code: 5700

Date: MAR 01 2018

Route To:

Subject: Personal Protective Equipment (PPE) Waiver

To: Regional Fire Directors

The Interagency Helicopter Operations Guide (IHOG) promotes safe, cost-efficient and effective aviation services by defining and standardizing national, interagency helicopter management and operational procedures for helicopter users. Personal Protective Equipment (PPE) identified in the IHOG establishes clothing and equipment that provide protection to an individual in a hazardous environment.

Waivers (FSM 5716.31, IHOG 9.III.A.4) for PPE requirements may be necessary because helicopter operations and field work may occur during seasons or in locations where extreme environmental conditions exist. In these instances, required PPE does not adequately protect employees during the performance of their duties. The following PPE requirements are waived for extreme environmental conditions provided the additional requirements listed below are followed.

The following table identifies the environmental conditions and approval for the PPE exceptions:

ENVIRONMENTAL CONDITIONS	REQUESTED PPE EXCEPTIONS
Snow, Extreme Cold	<ul style="list-style-type: none">• Leather, Rubber, or Synthetic Insulated Winter Footwear, extending over the ankle• Ski Boots• Synthetic Outer Pants or Bib Coveralls
Bogs, Marshes, Fens, Muskegs	<ul style="list-style-type: none">• Leather, Rubber, or Synthetic Water Resistant Footwear, extending over the ankle

The primary purpose of fire-resistant clothing and footwear is to provide the wearer with protection from flash fire burns. While it is understood that there are conditions that required PPE does not protect employees from environmental extremes, it is still critical that fire resistant clothing (such as fire resistant cotton, polyamide, aramide, polybenzimidazole, Kevlar, or blends thereof) be worn as a protective layer against the skin when use of the PPE exceptions listed above are used.

Agency personnel shall be informed of the increased personal hazard that is associated with wearing non-fire resistant clothing or footwear when the full complement of PPE is not worn. In addition, the approved Project Aviation Safety Plan (PASP) for the mission shall document PPE exceptions and reference this waiver.



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Regional Fire Directors

2

Questions regarding Personal Protective Equipment (PPE) exceptions and specifics in this letter should be addressed to Jeff Power, Assistant Director Aviation at jmpower@fs.fed.us or (202) 205-1410.



SHAWNA A. LEGARZA, PSYD
Director Fire and Aviation Mgt

cc: Regional Aviation Officers, Regional Aviation Safety Managers, Jeff Power, Paul Linse, John Nelson, Kent Hamilton, Ezequiel Parrilla, Tonya Rymer

10.17 Region 1 Pilot Training and Operations Guide (under development)

(in development: click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)

(Region 1 Supervisory Pilot—Standardization retains a copy of the plan)

10.18 NRCG Aviation Safety and Technical Assistance Team (ASTAT) handbook-draft
(click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)

10.19 NRCG 2018 letter on AIS

(click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)

10.20: **Region 1 Backcountry Airstrip Supplement** (under development)
(click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)

10.21 Region 1 Unmanned Aircraft Systems Supplement
(click the link to go the latest version on the R1 aviation sharepoint site)

[RASMP appendices](#)